

DAILY METAL REPORTER

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In This Issue

CONSUMPTION OF ZINC IN 1957 EXPECTED TO TOP '56 TOTAL

By J. L. KIMBERLEY

Executive Vice President, American Zinc Institute, Inc.

COPPERBELT AVERAGE OUTPUT COST IN '55 HIGHER THAN IN U. S. A.

By SIR RONALD PRAIN

Chairman, Rhodesian Selection Trust Limited

BRITISH METAL MARKETS

By L. H. TARRING

London, England

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WASHINGTON REPORT

METAL STATISTICS

FEBRUARY

1957

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Two LINE Editorials

People who used to worry about breaking their New Year's resolutions now save themselves this worry by not making any resolutions.

* * *

A manufacturer of potato chips announces plans to sell his product in varied colors. All the old poker players, of course, will prefer the blue chips.

* * *

"Few children nowadays," says a child psychologist, "are tied to their mothers' apron strings." What's so wonderful about that, when so few mothers wear aprons?

* * *

In the recent election in Albania 99.83 per cent of the citizens voted for the government slate of candidates. Special hero medals should be struck off for that minority of .17 per cent — if they are still alive.

* * *

An Ohio man who beat a drum for 80 hours and 35 minutes boasts that it is a record "that can't be beat." After such a prolonged drubbing, the same thing is probably true of the drum.

* * *

California's latest sensational race-horse is named Porterhouse. And it is naturally not surprising to learn that he has been winning a lot of stake races.

* * *

Returned prisoners report that in the Siberian prison stockades the temperature is sixty degrees below zero. That seems to be carrying the cold war to an extreme.

LEAD

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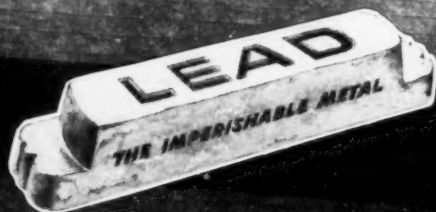
The Dome of the United Nations General Assembly Hall is covered with lead-coated copper sheets, the lead being exposed to the elements.

There is something symbolic about the choice of lead for protecting a building that carries the hopes and prayers of mankind for an enduring peace. For lead has a lasting quality, practically equal to that of the so-called 'noble' metals. Lead will last for centuries unchanged. It is indeed fitting metal to guard this world-renowned building, so dedicated to peace, against the battering and corrosive forces of nature.

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Washington Report



February 19, 1957

CONGRESS began to come to grips with metal industry problems during the month in review. The House on February 5 upheld an Appropriations Committee decision to cut off the Government's subsidy program of buying tungsten, columbium-tantalum, asbestos and fluorspar. The House action on the four minerals came as it passed a bill appropriating \$335,000,000 for several Government programs needing extra money to continue operating during the balance of the current fiscal year. Omitted from the bill was an additional \$30,000,000 to continue the Government buying program for the four minerals.

Western Congressmen abandoned plans to try to overturn the Appropriations Committee action on the House floor. They decided, instead, to leave the matter up to the Senate, where they predicted the Government purchase program for the four minerals would be restored. The Senate on February 19 voted to restore the \$30,000,000. The bill has been sent to a Senate-House conference to iron out differences.

The Appropriations Committee, in explaining its action, said there was no defense reason for continuing the program for the four minerals, and with the defense argument gone "there can be no sound justification for continuing in peacetime a subsidization program for the sole benefit of a very limited segment of the industry at such an exorbitant cost to the taxpayers of the nation."

It would seem that the House, in going along with the committee, ended right away for all practical purposes the buying program for the four minerals. The General Services Administration, which handles the buying, said it is already completely out of funds for tungsten buying and will shortly run out of money for the other minerals.

Lead, Zinc Buying

Industry quarters wondered what the House action portends for lead and zinc. U. S. producers who had offered lead and zinc for the Government long-term stockpile on January 23 were rather surprised by the actual purchases made by the GSA. In some instances the Government buying agency took only about 50 per cent of the quantity of lead that was offered. Producers, who offered to supply High Grade zinc metal in addition to Prime Western zinc, were turned

down on their High Grade and the GSA took only 50 to 60 per cent of the quantity of Prime Western offered.

In producing circles the opinion was expressed that the Office of Defense Mobilization, which determines the tonnages of domestically-produced lead and zinc to be purchased for the long-term stockpile, was probably trying to keep the quantities down in an effort to stretch out the funds that are still available for making such purchases.

Metal Barter Contracts

As for strategic materials acquired by this country in exchange for Government-owned surplus farm commodities, the U. S. Agriculture Department reported that in December it had contracted for \$11,800,000 worth of such materials. Contracts totaled \$36,100,000 in November, and for the full 1956 fiscal year contracts totaled \$104,900,000.

After deliveries are completed under the December contracts the Office of Defense Mobilization will receive \$4,900,000 of lead, \$4,600,000 of cobalt, and \$2,300,000 of antimony.

Import Situation

The stockpiling program for lead and zinc is not a solution to the domestic mining industry's problems, according to Rep. William Dawson (Rep., Utah). He supported proposed excise taxes on lead and zinc imports as the best possible solution to the industry's problems. Views of the American Mining Congress, which has urged the Government to impose on lead and zinc imports an excise

tax similar to that on copper, were outlined at a meeting here attended by industry leaders, Dr. Gabriel Hauge, economic advisor to President Eisenhower, and officials of the Office of Defense Mobilization. Rep. Dawson served as chairman at the meeting.

Julian Conover and other mining industry spokesmen stressed the need to draw up a long-range program for the lead and zinc industries. After hearing the industry's views, ODM officials promised to give consideration to the problem and asked for additional data. No date was set for any new meeting.

Mill Product Imports

Pressure also was mounting for Government action on imports of copper and brass products. T. E. Veltfort, manager of the Copper & Brass Research Association, in a statement issued January 22, said that the domestic copper and brass mill industry is very much concerned with the growing tonnages of such imports. Mr. Veltfort said that "while no definite conclusions have been reached as yet upon which to base an effective course of action, we are exploring all avenues of approach that show promise of affording effective relief as soon as possible."

Among the courses of action that will be considered are: control measures such as tariffs and quotas, the "escape clause" procedure applicable to tariffs, Section 7 of the Defense Act, which affords protection to defense industries, and the Anti-Dumping Act.

The usual bill to continue suspension of duties and import taxes on metal scrap until June 30, 1958, was introduced in Congress by Rep. McCarthy (Dem., Minn.). The measure, H.R.-4208, was referred to the House Committee on Ways and Means.

Nickel Priority

Distributors of ferrous and non-ferrous mill products were called upon on January 29 by Business and Defense Services Administrator H. B. McCoy to exercise extreme care in determining what orders may properly be regarded as entitled to priority treatment under the Defense Materials System. Mr. McCoy said one of the principal reasons for the request is to "make certain that during the nickel shortage nickel-bearing products are not obtained on orders purporting to be authorized controlled material orders but which are deficient technically because of failure to comply in one or more aspects with the formalities required by the regulation."

(Continued on Page 19)

BUSINESS IN MOTION

To our Colleagues in American Business . . .

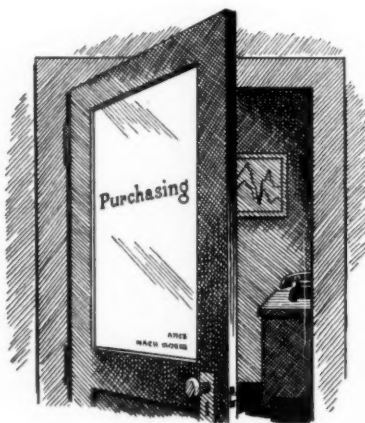
Said a Purchasing Agent to one of our T.A.'s (Technical Advisor) the other day, "Do you know what we do with this rod you are trying to sell us? I like to pass the time of day with you boys and compare golf scores, but since your prices, quality and delivery are pretty much the same as eight other companies how am I supposed to choose? Pick the one who parts his hair the way I like it? Not one of you has given me a reason why we should use your brass rod instead of the other fellow's."

The result of that conversation was that the Purchasing Agent arranged for the Revere T.A. to go through the plant. There he studied the various operations that might affect the rod, found out its end use and then made recommendations which saved that company money as well as aided in improving its product. Such experiences, and this is not the first one of its kind we know about, cite the importance of the Purchasing Agent in today's business, and how he can be the salesman's best friend.

In fact, the Purchasing Agent is the key man between a salesman and the production, design and engineering departments. And we, as others, have found that the best results are obtained only when the various departments collaborate; have round table discussions with all parties concerned. It is then

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1957 ZINC CONSUMPTION EXPECTED TO EXCEED '56; AUTOMOTIVE, GALVANIZING INDUSTRIES OPTIMISTIC

Highlights of Last Year: Slab Production Rise of 3% to New Peak; Second Highest Shipments on Record; Continued Gov't Stockpiling

By J. L. KIMBERLEY, Executive Vice President, American Zinc Institute, Inc.

THE year 1956 was one involving mixed trends and performance for the zinc industry. On the favorable side is the fact that consumption for the year will undoubtedly prove to be second or third best in the industry's history, approximating that of 1953 with only 1955's having been larger. Uncertainties resulted largely from — the decreased production of automobiles which meant, in effect, fewer die castings and less brass — the impact of the mid-Summer steel strike on the consumption of zinc in galvanizing — and the doubts which existed in connection with the Government's stockpile programs.

The United States production of slab zinc was at an all time high, exceeding the previous record of 1955 by about 3 per cent. Total shipments were the second highest on record with the assist of the largest shipments ever to Government account. Exports were less than half of the amount shipped out of the country during 1955. Nevertheless, accepting the situation as it exists with respect to stockpiling, stocks in the hands of smelters at the year's end were not excessive and stocks in the hands of consumers at the end of October were lower than at any time since February 1955.

While this is a review of zinc for 1956, it will not serve its best purpose if a forward look into 1957 is not included. The best evidence available from a consuming point of view indicate that 1957 will be larger than 1956. The automotive industry is optimistic and there seems to be good reason to believe that galvanizing will continue to expand. It is necessary on occasion for the American Zinc Institute to predict the near future of zinc and it is felt that there is reason to expect that 1957 may equal, or slightly exceed, the previous record consumption of 1955.

Domestic Mine Output

Domestic mine production, based on the 10 months' United States Bu-

Excerpts from Mr. Kimberley's review of the U. S. zinc industry in 1956.

METALS, FEBRUARY, 1957

reau of Mines figures at hand, projected to 12 months, will apparently show something on the order of a 5 per cent increase over the mine production of 1955, but this is low as compared to the production levels of the early 1940's which were half again as large as the mine production of recent years.

The price of slab zinc on January 1, 1956 was 13.00 cents per pound, f.o.b. East St. Louis, for Prime Western. On January 6 this price rose to 13.50 cents where it remained throughout the year. During the year the differential between Prime Western and Special High was 1.75 cents per pound, but freight is allowed on the latter grade. The practical result is that the premium between Prime Western and Special High was 1.25 cents with in between grades scaled down proportionately.

Slab Zinc Production

Slab zinc production at domestic smelters during 1956 totaled 1,062,954 tons, about 3 per cent over the previous record of 1955. Total shipments were down to 1,035,301 from 1955's high of 1,114,316 tons. Of the total

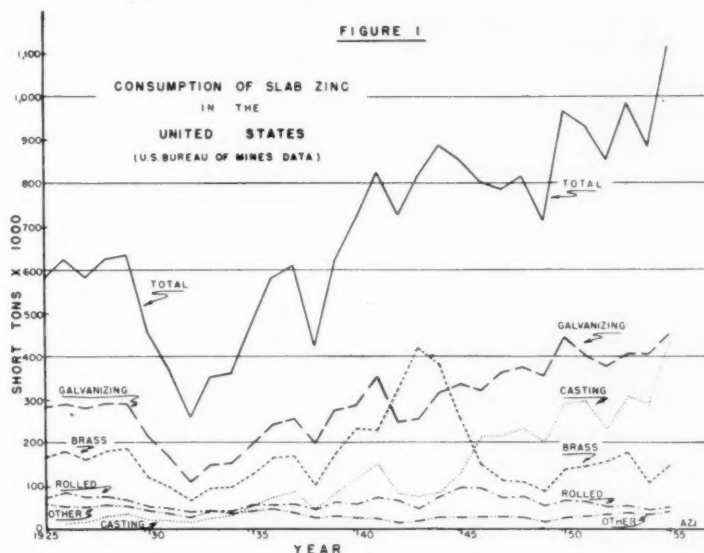
shipments 15.2 per cent went to Government account.

Smelter shipments are frequently used as a measure of domestic consumption, but a more accurate record of usage is to be found in the Bureau of Mines consumption statistics given in Table IV of this Review. Consumers report directly to the Bureau and include in their reports the influence of slab zinc consumed from all sources, both foreign and domestic, as well as of material drawn from their own inventories. Figures for the consumption of zinc after October 1956 will not be available until a time too late to serve current purposes and it is necessary therefore to estimate the consumption for the last two months.

Imports of slab zinc through October 1956 would indicate that the total of such imports will be up approximately 5 per cent over 1955. Importation of zinc ore may be up between 8 and 9 per cent.

Stocks of slab zinc in the hands of the consumers were 123,478 tons as of January 1, 1956 and 93,068 tons at the end of October. Producers'

(Continued on Page 9)



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Zinc Consumption in '57 Expected to Exceed 1956

(Continued from Page 7)

stocks varied during the year from a low of 39,833 at the end of February to a high of 104,307 at the end of August and to 68,632 tons at the end of December.

The Institute's domestic slab zinc statistics include both primary and secondary slab zinc production. Since January 1, 1948 the output of all regularly operating plants has been included. Unreported remelt and off-grade production, which is relatively insignificant in quantity, is not included. These statistics cover all grades of slab zinc produced from domestic and foreign ores and secondary materials. Imported slab zinc is not included. Stocks at December 31 represent producers' stocks only.

During the year, the United States producers of zinc have substantially improved the flexibility of operations with respect to fulfilling any foreseeable demand for any grade. Further plant expansions are under way and the user of zinc can feel a high degree of confidence that the material and grade needed will be available to meet his requirements. This situation of ample capacity, flexibility and supply is true, not only of production but also of proven ore reserves.

The foregoing is intended as a summary of the situation throughout the year. That which follows is primarily the tabular data from which the opinions expressed have been derived, along with comment on certain specific details.

Supply

United States domestic slab zinc production was 1,062,954 tons in 1956 as compared to 1,031,018 tons in 1955. A comment, not previously made, concerns daily average production which was at a new annual high of 2,904 tons per day. This compares with the previous high for 1955 of 2,825 tons per day. Production by grades is shown in Table I.

The industry's year at smelters was relatively free of major labor problems, although one major producer was on strike for about two months at mid-year.

Mine production is to be seen in Table II. It would appear that gains will have been recorded in the Eastern and Western States with the Tri-State area showing a significant decrease.

During the course of the 10 months January-October inclusive, reports from the Bureau of Mines, "Mine Production of Zinc" Nos. 179-188, have

TABLE I
U. S. Production of Slab Zinc According to Grade
(Tons of 2,000 lbs.)

	1952	1953	1954	1955	1956
Special High Grade...	295,801	312,810	270,159	378,215	358,982
High Grade	182,125	180,188	132,980	138,597	143,635
Intermediate	17,903	14,720	19,284	23,792	26,393
Brass Special	48,817	56,219	52,662	80,209	
Selected	13,608	1,930	1,233	3,904	
Prime Western	401,336	403,113	394,120	404,829	
Total U. S.	959,590*	968,980*	870,438*	1,029,546*	1,062,897†

* Source: U. S. Bureau of Mines and AZI.

† Preliminary — AZI (with deduction for metallurgical losses in converting grades).

TABLE II
U. S. Mine Production
(Tons of 2,000 lbs.) (Recoverable Zinc)

	States East of the Mississippi	West Central States: Arkansas, Kansas, Missouri, Oklahoma	Western States	Total U. S.
1952	185,939	94,410	385,652	666,001
1953	184,245	58,909	304,276	547,430
1954	168,098	67,491	237,882	473,471
1955	163,230	73,630	277,811	514,671
1956 Jan.-Oct.	144,192	52,177	253,393	449,762*
(AZI 1956—estimated total)	173,000	62,700	304,000	539,700

Source: U. S. Bureau of Mines.

* January-October inclusive (preliminary).

TABLE III
Slab Zinc Imports
(Tons of 2,000 lbs.)

From:	1952	1953	1954	1955	1956*
Australia		3,951	3,080	4,032	4,590
Austria					2,075
Belgian Congo		882	13,895	15,227	13,911
Belgium	6,854	21,549	7,540	17,750	21,083
Canada	69,775	107,925	105,154	113,401	86,383
French Morocco				1,264	
Italy	4,063	23,972	5,285	6,189	10,284
Japan	222				2,842
Mexico	18,686	33,878	9,726	19,480	11,309
Mozambique			112		560
Netherlands	3,976	4,338	1,461	1,078	1,915
Norway	110	6,323	717	504	
Peru	1,600	8,406	6,757	9,767	5,790
Portugal	12				
Rhodesia		1,064		281	
Switzerland		165			
Trieste, Territory of					110
United Kingdom		6,317	22	79	610
West Germany	7,619	13,906	3,109	6,643	8,982
Yugoslavia	2,788	1,900			500
Total	115,705	234,576†	156,858†	195,695†	170,944†

Source: Bureau of the Census, U. S. Department of Commerce.

* January-October inclusive (preliminary).

† Included in these totals are duty-free entries for Government Account. In 1953 — 19,938 tons. In 1954 — 10,846 tons. In 1955 — 9,854 tons. In 1956 (Jan.-Oct.) — 32,640 tons.

carried news of strike settlements, the reopening of old mines and the start of production at new properties well in excess of mine shutdowns. The net result has been a gain with the exception of production in the West Central States as indicated in Table II.

Several shutdowns due to strikes starting in 1955 were settled during 1956 after significant periods — one of a year's duration. Only one new strike was reported and that was short.

Table III relates to the total of slab zinc imported, and includes the metal "entered duty-free in bond" as well as "duty-paid." The duty-free totals available to us are indicated in a Table III footnote. As previously reported, there is evidence that slab imports will exceed those of 1955 by

TABLE IV
Slab Zinc Consumption
(Tons of 2,000 lbs.)

	1955	1956†
Galvanizing	451,141	351,661
Brass Products ..	146,243	104,015
Zinc-Base Alloys	430,807	286,401
Rolled Zinc	51,589	38,617
Zinc Oxide (French Process)	22,433	15,371
Other	17,599	22,536
Total U. S.	1,119,812‡	818,601†

Source: U. S. Bureau of Mines.

† Includes 2,997 tons of remelt zinc.

‡ January-October inclusive (preliminary) includes 8,600 tons estimated unreported consumption.

about 5 per cent. It is to be noted that Canada and Belgium were the major points of origin for slab imports.

(Continued on Page 19)

COPPERBELT AVERAGE ELECTRO COPPER OUTPUT COST IN 1955 OVER 19c POUND AGAINST 18¼c IN U. S. A.

Rhodesia, Congo May Become Main World Producing Field If Question of Future Relationships Between European and African Workers Is Resolved

By SIR RONALD PRAIN, O. B. E., Chairman, Rhodesian Selection Trust Limited

WITHIN the Copperbelt exists today the third largest copper producing industry in the world. From its mines there now comes a copper production of about 500,000 tons a year. Within the industry there are employed approximately 7,000 Europeans and 38,000 Africans who, with their families, constitute a population of at least 137,000 on the property of the Mines.

If we take into account the other people living in the Copperbelt who find employment as an indirect result of the copper mines, including all Government officials, personal servants, and those working on the railways, in the stores and industries, we estimate that there are perhaps 400,000 people living on the Copperbelt and owing their existence there in one way or another to the copper-mining industry.

In 1955 the copper industry accounted for 63 per cent of the exports of the Rhodesian Federation and 94 per cent of Northern Rhodesia's exports to destinations outside the Federation. In the financial year 1955/56 the industry provided about three-eighths of the total revenue of the Central African Federation.

History of Industry

The history of this industry is of comparatively recent origin. Copper had been worked for centuries in Central Africa by the native peoples on a most primitive scale and this started a certain amount of prospecting in Central Africa after this part of the world attracted public attention as a result of the travels of David Livingstone. The first prospecting by Europeans appears to have occurred towards the end of the last century and it was in 1899 that George Grey discovered the Kansanshi Mine and in 1902 that the outcrop of the Roan Antelope Mine was discovered by a prospector named

William Collier who also in that year found the Bwana Mkubwa Mine.

Unfavorable Factors

Even these discoveries, however, attracted little attention at the time owing to certain factors which at that time were considered to be unfavorable for the opening up of copper mines in this part of the world. There were at least four major factors. To begin with, the enormous distances and transportation problems involved, and secondly the health problems, among which the scourge of malaria appeared to be insuperable. Thirdly, at that time the United Kingdom had the whole world to buy copper from and had not yet experienced the dangers of a world war, nor the embarrassment of a dollar shortage. The fourth problem concerned the technical difficulties of treating the particular types of ores represented in the Kansanshi and Bwana Mkubwa Mines.

Most of the problems, however, disappeared during the following twenty-five years.

New Technical Advances

In the Katanga, oxide ores averaging as much as 15 per cent copper were common, but the search for similar deposits on the Rhodesian side resulted in the finding of ores of much lower grade, with an average of perhaps 3 per cent to 5 per cent copper, also in the form of oxides. Pitting and shaft sinking down to water level gave discouraging results. What was not realized until later was that at moderate depths but generally well below ground water level, these same lean Rhodesian oxide copper deposits turned to sulphides still running from 3 per cent to 5 per cent copper.

This realization occurred at about the time that metallurgical science was discovering the flotation method of concentration. This combination of new geological and metallurgical knowledge created immense interest in the Rhodesian deposits, which thus assumed relatively suddenly an economic value which had never previously been attributed to them.

During this quarter century, furthermore, the United Kingdom had learned the lessons of a world war and was determined, if possible, to acquire its own sources of copper for the future.

Two Groups of Mines

Organizationally, the mines of the Copperbelt fall into two groups, one predominantly controlled by British

and American interests, and the other predominantly by South African interests. These two groups between them control all the companies concerned directly with copper mining and, in addition more than a dozen subsidiary companies which serve the main mines.

Roan Antelope, which I have already mentioned as being discovered in 1902, was formed into a company in 1927 and started production in 1931.

This mine is today hoisting and milling between 5 million and 6 million tons of ore each year and on this basis can claim to be the largest underground copper mine in the British Empire. It is large by any standard, having a peculiar shape to its orebody, the strike of which extends for about 10 miles on the surface. To work this orebody 24 shafts have been sunk from the surface and no less than 1,000 miles of underground workings have been driven. The ore is crushed, floated and then smelted to produce a blister copper which is shipped to the markets of the world, and the actual copper production runs between 95,000 and 100,000 tons a year.

Nkana Discovered in 1910

Thirty-four miles by road to the north of Roan Antelope there is the mine of Nkana, which was discovered in 1910. The company which owns and operates this mine is the Rhokana Corporation, which is the successor of the Rhodesian Congo Border Concession Ltd., which was formed in 1923. There are actually two mines worked jointly, Nkana and Mindola. They began production in 1931 and today produce about 95,000 tons of copper a year.

In addition to being a mining center, Nkana is a concentration of smelting and refining facilities. When the extensions to the present smelter are completed this will be the second largest in the world. Some of the plants at Nkana are treating copper from other mines. The number of European employees at Nkana is over 1,800 and African employees about 10,400.

Mufulira Mine

Twenty-six miles to the north-east of Kitwe is the Mufulira Mine, which was discovered in 1923, and began production in 1933. Mufulira is capable today of producing about 112,000 tons of copper a year. Last year

Excerpts of address at meeting of New York Section of American Institute of Mining, Metallurgical and Petroleum Engineers, New York City, February 7, 1957.

it announced that it would increase production by about 50 per cent, which would give it an output of about 168,000 tons a year. This would make it the third largest underground copper mine in the world. It has large ore reserves and its mining operations are conceived and carried out on a large scale. It is also the wettest mine on the Copperbelt; in fact, one of the wettest in the world, the amount of water which is pumped out of it daily being about ten times the amount of copper ore.

Other Producing Mines

Thirty-three miles north of Kitwe is the Nchanga Mine, discovered in 1923 and which came into production in 1939. The grade of ore at Nchanga is higher than that at the other mines I have mentioned and, although it does not mine and mill the highest tonnage of ore, the result in terms of copper is the highest on the Copperbelt, running today at about 123,000 tons per annum. This mine also has huge reserves and it will start an open pit operation in the near future which will even out the grade variations in the various parts of the mine.

The Chibuluma mine, situated about seven miles to the West of Kitwe was brought into production early in 1956. This is a relatively small but high grade copper cobalt mine which is producing at the rate of 20,000 tons of copper a year. Cobalt concentrate will be smelted at a plant under construction at Ndola.

The Bancroft Mine, which is about 15 miles north of Nchanga, started production only last month, and initially it will produce at the rate of 48,000 tons of copper a year, and eventually 96,000 tons a year in 1959.

Undeveloped Ore Bodies

There are at least two undeveloped ore bodies, named respectively Chambishi and Baluba. Last year it was announced that, subject to the necessary finance being found, it was intended to open up Chambishi Mine as soon as possible. The mine has published ore reserves of 35 million tons of 3.37 per cent copper, and it is expected that it might come into production in about 1960 at a rate initially somewhat like that of Chibuluma's. Baluba has published ore reserves of 70,000,000 tons of mixed copper-cobalt ore running 2.68 per cent copper and 0.18 per cent cobalt.

Except for the undeveloped mines I have not given you figures of grade of ore reserves. By United States standards Copperbelt grades would appear to be high. In the six producing mines the average grade in the various orebodies ranges from 2.64 per cent to 7 per cent with an overall average of about 3.59 per cent sulphide copper. I should make it clear that this is the block grade and that waste dilution will result, of course, in a somewhat lower milling grade. The total published ore reserves of the six producing mines and the two undeveloped mines I have mentioned are given as just over 700 million tons, capable of yielding at least 18 million tons of copper. This repre-

sents about 25 per cent of the world's published ore reserves in terms of recoverable copper.

Copperbelt Reserve Grade

Before leaving the question of grade, it may interest some of you to know that the average Copperbelt reserve grade of 3.59 per cent which I have just given you is just about double what we calculate to be the average ore reserve grade of all the published reserves in the free world. A recent study we made on this point appeared to indicate published reserves of 4,878 million tons of ore at a grade of 1.79 per cent copper, containing a gross copper content of about 87 million tons. I figure that this might represent a recoverable content of about 72 million tons of copper, or 24 years' reserves at the 1955 consumption rate for new copper in the free world. This would fall to 18 years' reserves on the basis of 4 million tons a year consumption which some people estimate may be the rate in 5 years time.

Other Metals

Some of these mines produce, or will produce, metals other than copper. For many years the Rhokana Corporation has been producing cobalt and at present its rate of production runs at about 2,400,000 pounds per annum, which represents about 10 per cent of the world production. Chibuluma will also produce cobalt at a rate which has been announced at 1 million pounds per annum, and cobalt is known to exist in, for instance, the Baluba Mine. All these mines produce small quantities of gold and silver as a by-product of electrolytic refining, but they are not important producers of these metals in any sense. Rhokana will produce some uranium.

Among copper producing countries the United States comes first with an annual production of more than 1 million tons. In 1953 and 1954 Northern Rhodesia held second place, which is now occupied by Chile. If, as I mentioned earlier in this address, the Katanga is taken as the same geological field as the Rhodesian field, this district would today be very easily the second, and one day perhaps the first copper producing field of the world.

Three Refineries

The refining of copper is in the hands of three refineries. One of these belongs to the Mufulira Company and exists for the purpose of treating merely the Mufulira output. The other two are respectively owned by the Rhodesia Copper Refineries Limited and the Ndola Copper Refineries Limited, both of which exist to treat the output of more than one mine.

Labor Wage Scales

The scale of pay and remuneration for both European and African employees is comparable to that found anywhere else in Africa. In saying this I refer, of course, to two different scales of pay and remuneration, namely, one scale for the European, which compares favorably with that

of Europeans anywhere else in the mining industry in Africa, and the other for Africans, which compares more than favorably with that for Africans anywhere else within the Federation.

Outlook for Copperbelt

It remains for me to give my opinion as to the outlook for this industry. If we assume, and I suggest must assume, that the question of the future relationships between European and African workers will be resolved, we shall then have the prospect of an industry growing from strength to strength, with the possibility that within the lifetime of some of us it may become, together with the Congo, the main producing field in the world.

There are, however, two other factors which argue favorable for Rhodesia. One is that similar processes are occurring in some of the other copper producing fields of the world; the other is that in the total cost of production of the Rhodesian mines there is a large element of variable cost, represented principally by the royalties payable. These royalties are based on the price of copper, and therefore if the price of copper were to fall drastically, this element would also fall drastically, and thereby provide a certain amount of cushion in bad times. There are other elements of this sort and these tend to make the cost of production in Rhodesia somewhat difficult to compare with those of other producing fields.

Low Cost a Myth

There is one comparison, however, which is commonly made, especially in some sections of the press, and to which I should like to refer. This is the statement that the cost of producing copper in Rhodesia is far lower than the cost of producing copper in the United States. It is high time that this myth was exploded. At the risk of over-simplification, I can state that during the year 1955 the average costs on the Copperbelt were over 19 cents per pound of electrolytic copper, compared with about 18¼ cents per pound average cost of production within the United States. The exactness of these figures is open to question, but I do not think that the generality is so.

Finally, on this question of costs, we have recently made a study of the cost of producing copper and have been able to obtain published data or estimates on the cost of producing copper for about five-sixths of all free world production in 1955. We find that 52 per cent was produced at a cost less than the Copperbelt and 32 per cent at a cost above, the Copperbelt accounting for 16 per cent of all the known costs by tonnage.

I mentioned earlier that if the price of copper were to fall drastically so would certain elements in our costs. Assuming that the price fell to a point where the Copperbelt were to go to a break-even basis, then I calculate that 38 per cent of the same tonnage of world copper would still be produced more cheaply, and 46 per cent would be produced at a higher cost.

COPPER DEMAND IN EUROPE SLUGGISH, REFLECTING UNCERTAIN PRICE OUTLOOK, SATISFACTORY DEMAND

Curtailed Industrial Pace Due to Oil Shortage Affects All Metals; Tin Stocks Tight; U. S. Barter Program Supports Lead, Zinc Markets

February 4, 1957

THE easier trend in copper prices on the London market which characterized the position towards the end of last year was continued in January. That the recent setback is now regarded as more than just a temporary phenomenon is indicated by the fact that the big American domestic producers cut their quotation by 2 cents per pound at the beginning of February, and even so did not seem to have quite caught up with the downward drift in prices.

It is perhaps hardly surprising that consuming demand in Europe has been rather sluggish recently, as apart from a general disinclination to buy more than is absolutely necessary when the price outlook is uncertain and the availability of supplies is satisfactory, industry generally on this side of the Atlantic is still overshadowed to a considerable extent by the oil shortage, the end of which is not yet in sight. The motor car industry is, of course, the one which has been most hit, but in other cases even if operations have not so far been seriously interfered with, the uncertainty regarding future supplies of fuel oil naturally acts as a damper.

The lassitude on this side of the Atlantic might have had less effect on the general position had it not been accompanied by a rather similar quietness in the United States. This has occasioned some surprise as year-end forecasts of American industrial activity in 1957 were for the most part pitched on a hopeful note. However, it is noticeable that current talk on this subject seems to be a little less assured. No doubt there is some accumulation of buying to be done both in America and in Europe, but it is always surprising how long users can stay out of the market when they think there is some price advantage to be gained by doing so.

There is now, of course, general agreement that production on a world basis has comfortably overtaken consumption and—strikes apart—shows every indication of getting bigger over the next two or three years. As at present few people here are prepared to believe that world consumption of copper this year will mark any improvement over 1956, and most people think it might well shrink somewhat, the question emerges of whether, and if so how producers intend to cope with the problem.

Down to around £250 per ton it is probable that the recession in prices has not really worried anyone very much, and quotations could no doubt

By L. H. TARRING
London, England

RST PRICE CHANGES

Changes in the Rhodesian Selection Trust's fixed electrolytic copper price, since it was established on May 9, 1955, and applicable to the RST's regular customers in the U. K. follow:

Date of Change	Pounds Sterling (Long Ton)	Equivalent in Cents Per Pound
1955		
May 9	280	35.00
August 2	325	40.625
September 5	360	45.00
1956		
February 27	385	48.125
April 30	350	43.75
May 28	320	40.00
June 18	300	37.50
July 2	275	34.375
August 1	300	37.50
October 15	280	35.00
October 24	265	33.125
November 12	280	35.00
December 17	270	33.75
1957		
February 1	250	31.25
February 19	240	30.00

sink lower yet without putting most of the major producers into the red. Nevertheless, below £250 there is undoubtedly a certain amount of apprehension on the part of producers generally. For the present, however, there is no indication whatever that the big mines outside the United States have any intention of curtailing output and expansion plans are still going ahead. As a result all eyes are on the American domestic producers who traditionally favor this method of adjusting supply and demand to balance prices, and gave solid evidence of the determination they can show in this matter in 1953.

If this line of thought is accurate

the next big question is at what level are they prepared to make a stand. Most people here had thought that when the domestic quotation would be cut it would be reduced to 33 cents and not to 34 cents, and they are now wondering whether a stand is to be made at this figure or whether there is the possibility of a further cut before the producers "dig their toes in."

So far, it has to be remembered, the excess of production over consumption has been in the main held by the producers and there is not, in fact, a great deal of free metal offering on the open market. Moreover, with the general political situation still a long way from satisfactory, there is little incentive for operators to open a bear account on any appreciable scale. Had there been any real selling pressure in recent weeks it is almost certain that the downward drift in prices would have been much more rapid.

It is as well, of course, to remember that prices are now more than £180 a ton below their 1956 peak, which is a drop of sufficient dimensions to make most people careful. Nevertheless, even if it proves that £250 is a psychological rallying point at which there is some improvement in demand, there are a good many observers who believe that the lowest point for copper in 1957 has not yet been reached. It is cynically observed that the likelihood of serious strikes at producing points diminishes as the technical position of the market deteriorates.

On the whole it may be hoped that prices will not go too low, as a period of reasonable stability somewhere in the region of the current level of values might do much to restore consumers' faith in the red metal and

U. K. COPPER STATISTICS

The British Bureau of Non-Ferrous Metal Statistics reports stocks of copper in the U. K. at the end of November at 14,670 tons of blister and 41,165 tons of refined (of which at consumers 26,509 tons and 4,773 tons in London Metal Exchange approved warehouses) compared with 13,873 tons of blister and 45,020 tons of refined at the end of October. Imports during the month totaled 9,300 tons of blister and 23,485 tons of refined and production in the same period was 10,202 tons of primary refined, 941 tons of secondary blister and 8,821 tons of secondary refined.

Consumption included 12,242 tons of scrap and 47,144 tons of refined, full details of which are given below:

	Nov. 1956	Nov. 1955	Nov. 1956
Unalloyed Copper Products			
Wire (1)	25,147	217,118	230,368
Rods, Bars & Sections	1,623	17,430	17,665
Sheet, Strip & Plate	5,447	58,226	53,378
Tubes	5,377	46,049	49,679
Castings & Misc.	650	5,800	7,150
Alloyed Copper Products			
Wire	1,461	17,466	16,253
Rods, Bars & Sections	10,523	138,936	114,390

	Nov. 1956	Jan.-Nov. 1955	Jan.-Nov. 1956
Sheet, Strip & Plate	8,504	127,093	102,955
Tubes	1,928	20,246	20,698
Castings & Misc.	6,864	65,519	71,054
Copper Sulphate	4,367	36,889	45,996
Total all products	71,891	750,772	729,496

Copper Content of Output	59,386	603,468	592,115
Cons. of Refined Copper (2)	47,144	455,337	462,289
Cons. of Copper & Alloy scrap (3) (copper content)	12,242	148,131	129,826

Notes: (1) Consumption of H. C. Copper and Cadmium Copper Wire Rods for Wire and production of Wire Rods for export.

(2) Virgin and secondary refined copper.

(3) Consumption of copper in scrap is obtained by the difference between copper content of output and consumption of refined copper, and should be considered over a period since monthly figures of scrap consumption are affected by variations in the amount of work in progress.

METALS, FEBRUARY, 1957

AVERAGE BRITISH PRICES FOR COPPER, TIN, LEAD, ZINC

(Per Long Ton)

Mean of Bid and Asked Cash Quotation at Close of Morning Session on London Metal Exchange

	COPPER			TIN			LEAD		ZINC	
	Cash	3 Months	Settlement	Cash	3 Months	Settlement	Current Month	3rd Following	Current Month	3rd Following
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1954 Averages	248 17 11	239 17 7	249 0 11	718 8 11	709 17 7	720 6 7	98 8 12	94 7 4	78 5 4	77 16 11
1955 Averages	331 14 11	341 0 3	352 5 6	740 2 12	736 12 11	740 12 8	105 17 3	105 9 6	90 13 4	89 12 3
1956 Averages	328 14 5	324 13 1	329 1 8	787 14 9	774 7 7	788 13 3	116 6 5	114 8 9	97 14 3	95 3 7
1957										
January aver.	265 17 11	264 14 4	266 3 2	789 3 2	771 10 5	789 16 4	116 5 1	114 10 8	103 5 1	98 13 8

insure a continued long-term growth in the demand for it.

Texas City Tin Smelter

January, 1957 will no doubt long be remembered in the tin market as the month in which the active operation of the big Texas City tin smelter on behalf of the American Government came to an end. It also marks an important milestone with regard to the disposal of market surpluses of tin.

For a long time now the U.S. Government has been taking off the market a substantial world surplus of production over consumption, but with the sale of the Texas smelter it intends to do so no more. In view of the vast accumulation of tin it has acquired this certainly cannot be wondered at. Fortunately for the tin producers this step was not taken until the International Tin Agreement was in full operation, so that should the need arise there is now another cushion against the possible impact of harsh economic conditions.

As at present organized the Agreement cannot offer much support until prices have fallen quite a long way from their recent level. There is, however, a strong indication that a little later in the year the price tiers in the Agreement will be raised. Bolivia has definitely proposed such a move, and to a greater or lesser degree other producing countries are sympathetic. How consumer signatories to the agreement will react remains to be seen, but it is over three years since

U. K. TIN STATISTICS

Stocks of tin in the U. K. at the end of November at 3,436 tons (1,485 tons held by consumers) showed a large increase over the 2,737 tons at the end of October (1,420 tons held by consumers). Imports during the month totaled 445 tons and production was 2,293 tons of primary and 31 tons of secondary.

Consumption during November was 2,042 tons; full details, as supplied by the British Bureau of Non-Ferrous Metal Statistics, appear below:

	Nov. 1956	Jan.-Nov. 1955	Jan.-Nov. 1956
Tinplate	940	9,139	9,286
Tinning:			
Copper Wire	45	487	445
Steel Wire	7	102	94
Other	75	742	773
Total	127	1,331	1,312
Solder	205	2,235	2,598
Alloys:			
Whitemetal	292	3,464	3,193
Bronze & gunmetal	249	2,292	2,546
Other	34	415	421
Total	575	6,171	6,160
Wrought Tin (1)			
Foil and sheets	29	307	271
Collapsible Tubes	33	388	319
Pipes, Wire and Capsules	4	46	44
Total	66	741	634
Chemicals (2)	119	964	966
Other Uses (3)	10	126	113
Total All Grades	2,042	20,707	21,069

NOTES:

- (1) Includes Compo and "B" Metal.
- (2) Mainly Tin Oxide.
- (3) Mainly Powder.

the terms of the agreement were first drawn up and costs everywhere have risen substantially since then.

During the past month the spot supply position of tin has been distinctly tight in the U. K. Metal Exchange warehouse stocks have fallen to a dangerously low level of only just over 500 tons, so that it is not surprising that the backwardation has been wide — well over £20 a ton. Consumers have been buying fairly steadily as it is obviously unsafe to be caught short in such conditions.

Eastern supplies have been threatened by a strike at the Penang smelter of the Straits Trading Co., but in fact shipments from Malaya in January topped 6,000 tons, helped by the fact that the company was able to divert much of the ore destined for Penang to its older plant at Singapore.

Gov't Lead Disposals

The most interesting development in connection with lead here during the past month was the announcement in January that the Government intends to dispose of some 30,000 tons of lead from its strategic holdings spread over nine months beginning in March. Of this total, however, only about 4,000 tons are being put up to open tender on February 13, the remainder being offered back to the original producers or their agents.

Upwards of 3,000 tons of lead a month represents quite a substantial proportion of total U. K. consumption, especially as on the basis of current evidence this is likely to be rather lower in 1957 than in 1956. So far

demand has held up pretty well, but with a depressed motor car industry, rationed petrol (which means less lead tetraethyl) and the credit squeeze which tends to hold in check both industrial building and the building of houses, it cannot be said that the outlook is particularly cheerful.

However, thanks to the support which the American barter program gives, prices have not suffered very much, and as far as can be seen there is not likely to be any burdensome surplus of lead in Europe for some time to come. So much depends upon the American Government's buying policy, however, that a very watchful eye is kept on developments in the U. S. A. The fact that not all the domestic lead offered to the stockpile in the last month or two has been taken has certainly not escaped notice.

European Zinc Tight

Thanks to the intake of foreign zinc by the U. S. Government under its barter arrangements, the European supply position has continued quite tight. This has been most marked in respect of g.o.b. quality metal and there was some disappointment felt here that no indication of U. K. Government stockpile releases of zinc was made when the lead plans were announced.

It is presumed that the Government has encountered some problems in connection with the quantities of the different grades of zinc which it (Continued on Page 19)

U. K. ZINC STATISTICS

According to the British Bureau of Non-Ferrous Metal Statistics, stocks of zinc in the U. K. at the end of November at 46,364 tons (19,889 tons held by consumers and 1,921 tons in L.M.E. approved warehouses) showed only a slight decline from the 47,364 tons in stock at the end of October. Imports during November totaled 12,813 tons, and production was 5,783 tons of virgin.

Consumption, full details of which appear below, was 19,782 tons of virgin and 527 tons of scrap and remelted.

	Nov. 1956	Jan.-Nov. 1955	Jan.-Nov. 1956
Brass	8,536	111,915	95,701
Galvanizing	8,987	99,086	97,452
Of which: General	3,008	31,895	31,945
Sheet	2,979	31,164	29,638
Wire	1,596	20,486	18,985
Tube	1,404	15,541	16,884
Rolled Zinc	2,515	20,790	21,690
Zinc Oxide	2,473	27,667	24,629
Zinc Diecasting & Forming Alloy	3,060	37,305	32,036
Zinc Dust	1,105	10,166	9,158
Miscellaneous Uses	1,037	10,985	10,911
Total All Trades	27,713	317,914	291,577

Of which: Slab Zinc:			
High Purity (99.99%)	3,618	40,605	37,374
Electro & High Grade (99.95%)	5,024	60,539	55,181
Prime Western g.o.b. & debased	11,140	129,555	115,988
Remelted Zinc	527	5,269	5,127
Brass & other copper alloy scrap (zinc content)	3,856	48,332	44,508
Scrap zinc metal, alloy, residues, etc. (zinc content)	3,549	33,614	33,399

U. K. LEAD STATISTICS

The British Bureau of Non-Ferrous Metal Statistics reports stocks of imported virgin lead in the U. K. at the end of November at 20,612 tons (of which 9,828 tons held by consumers and 321 tons in London Metal Exchange approved warehouses) compared with 20,861 tons at the end of October; and stocks of English refined lead at 11,413 tons (of which 6,782 tons held by consumers) compared with 11,801 tons at the end of October. Imports during the month were 14,487 tons, and production of English refined was 8,276 tons.

Consumption totaled 14,423 tons of imported virgin and 8,518 tons of English refined, full details of which are given in the following table:

	Nov. 1956	Jan.-Nov. 1955	Jan.-Nov. 1956
Cables	9,991	99,807	101,416
Batteries—as metal	2,590	29,199	25,496
Battery Oxides	2,427	26,507	23,646
Tetraethyl Lead	1,724	19,621	19,449
Other Oxides and Compounds	2,350	26,171	24,052
White Lead	894	10,482	9,507
Shot	394	4,358	4,141
Sheet and Pipe	6,672	73,434	69,124
Foil and Collapsible Tubes	458	4,736	4,616
Other Rolled and Extruded	651	7,722	7,156
Solder	1,171	12,404	12,642
Alloys	1,631	14,515	15,730
Miscellaneous Uses	1,083	12,149	11,310
Total Consumption	32,036	341,105	328,287

Of which:			
Imported Virgin Lead	14,423	196,642	160,065
English Refined	8,518	61,682	77,839
Scrap, inc. remelted	9,095	82,781	90,389

United States Duties on Principal Ore and Metal Imports

(Including Revisions in Effect June 30, 1956, Under Geneva Agreements)

(Quantities Are in Pounds Unless Otherwise Stated; n.s.p.f. Stands for "Not Specially Provided For.")

COPPER

NOTE — The excise tax of 4c a pound on copper (which was reduced to 2c a pound by the Geneva Trade Agreement) was suspended in April, 1947, until March 31, 1949, and on expiration it was further suspended until June 30, 1950. The tax was reimposed on July 1, 1950. It was suspended again on May 22, 1951, retroactive to April 1, 1951, and until February 15, 1953, and again until June 30, 1954. Suspension further extended to June 30, 1955, and again until June 30, 1958. If import tax is restored, the 1956 Geneva Agreement provides for 5% reductions effective on June 30 of 1956, 1957 and 1958, provided the price is above 24c; if the price is below 24c the 2c tax would prevail.

Copper ore and concentrates, usable as flux, etc., copper content	free
Copper ore and concentrates, product of Cuba and Philippines, copper content	free
Copper ore and concentrates, copper content	free
Regulus, black, or coarse copper, and cement copper, copper content	free
Unrefined black, blister, and converter copper in pigs or converter bars, copper content	free
Refined copper in ingots, plates or bars, copper content	free
Copper rolls, rods or sheets	1 1/4c lb.
Copper seamless tubes and tubing	3 1/2c lb.
Copper plain wire	12 1/2%
Copper brazed tubes†	5 1/4c lb.
Old and scrap copper, fit only for remanufacture; and scale and clippings, copper content	free

BRASS

Brass rods, sheets, plates, bars, strips, Muntz or yellow metal sheets, sheathing, bolts, piston rods, shafting and bronze rods, tubes and sheets	2c lb.
Brass tubes and tubing, seamless	2c lb.
Brass tubes, brazed, angles and channels	.6c lb.
Brass and bronze wire	12 1/2%

LEAD

NOTE — Import duties on lead-bearing ores, flue dust, and mattes of all kinds, lead bullion or base bullion, lead in pigs and bars, lead dross, reclaimed lead and antimonial lead were suspended February 12, 1952, and reimposed on June 26, 1952. Lead scrap duty was reimposed July 1, 1952.

Lead-bearing ores and mattes, n. s. p. f., lead content	3/4c lb.
Bullion or base bullion, lead content	1 1/16c lb.
Pigs and bars, lead content	1 1/16c lb.
Reclaimed, scrap, dross, lead content	1 1/16c lb.
Babbitt metal and solder, lead content	1 1/16c lb.
Pipe, sheets, shot, glaziers' lead, and wire	5/16c lb.
Type metal and antimonial lead, lead content	1 1/16c lb.
White lead	1.05c lb.
Litharge	1 1/4c lb.
Red lead	15/16c lb.
Orange mineral	1c lb.

ZINC

NOTE — Import duties on zinc-bearing ores, and on zinc in blocks, pigs and slabs were suspended February 12, 1952, and reimposed on July 24, 1952. Tax on old zinc and dross and skimmings reimposed July 1, 1953.

Zinc-bearing ores, except pyrites containing not more than 3% zinc, zinc content	6/10c lb.
Zinc contained in zinc-bearing ores, n. e. s., not recoverable, zinc content	6/10c lb.
Zinc, old and worn out, fit only for remanufacture	3/4c lb.
Dross and skimmings	3/4c lb.
Zinc in blocks, pigs or slabs	7/10c lb.
Zinc in sheets	1c lb.
Zinc sheets, plated with nickel or other base metal, or solutions	1 1/8c lb.

Zinc dust	7/10c lb.
Zinc die-casting alloys	12 1/2%
Zinc oxide and leaded zinc oxides containing not more than 25% lead, dry	3/5c lb.
ground in or mixed with oil or water	1c lb.

MISCELLANEOUS METALS AND ORES

Aluminum, metal and alloys, crude, except alloys elsewhere provided for†	1.40c lb.
Aluminum scrap	free
Aluminum plates, sheets, bars, rods, circles, squares, etc.†	2.80c lb.
Antimony ore, antimony content	free
Antimony metal and regulus	2c lb.
Antimony needle or liquidated	1/4c lb.
Antimony oxide	1c lb.
Antimony sulphides	1/2c lb. & 12 1/2%
Arsenic, metallic†	2.80c lb.
Arsenious acid or white arsenic	free
Bauxite, crude*	free
Bauxite, refined**	1/4c lb.
Bismuth	1 1/8%
Bismuth salts and compounds	35%
Beryllium metal and compounds†	23 1/2%
Beryllium ore	free
Cadmium	3 3/4c lb.
Cadmium flue dust, cadmium content	free
Chrome ore or chromite	free
Chrome or chromium metal†	11 1/2%
Cobalt metal	free
Cobalt ore and concentrates, cobalt content	free
Magnesium, metallic†	17.20c lb.
Magnesium alloys, powder, sheets, wire†	19c lb. & 9 1/2%
Magnesium scrap	free
Manganese ores, containing over 10% manganese, manganese content	1/4c lb., except Cuba, free
Molybdenum ore or concentrates, molybdenum content†	33c lb.
Nickel ore, matte and oxide	free
Nickel and alloys, nickel chief value, n. s. p. f., in pigs, ingots, shot, cubes, grains, cathodes, or similar forms	1 1/4c lb.
Nickel, bars, rods, plates, sheets, castings, strips, wire or electrodes	12 1/2%
Nickel scrap	free
Nickel tubes, tubing	6 1/4%
(if cold rolled, drawn or worked — 2 1/2% extra)	
Platinum, grain, nuggets, sponge and scrap, oz. troy	free
Platinum in ingots, bars, sheets, or plates, not less than 1/8 in. thick, oz. troy	free
Platinum, ores, platinum content, oz. troy	free
Quicksilver or mercury	25c lb.
Selenium and salts	free
Tantalum	12 1/2%
Tin ore, cassiterite, and black oxide of tin, tin content	free
Tin in bars, blocks, pigs, grain, granulated, and scrap, and alloys, chief value tin, n. s. p. f.	free
Tungsten ore or concentrates, tungsten content	.50c lb.

*Crude bauxite import duty suspended to July 15, 1958. **Under Public Law 25 alumina imported for use in aluminum production is free for entries from July 17, 1956 to July 16, 1958. †Tariff to be reduced 5% on June 30, 1957 and 5% on June 30, 1958, under Geneva Agreement which expires on June 30, 1959.

DOMESTIC COPPER DEMAND LIGHT, SUPPLIES GOOD; PRODUCERS AND SMELTERS REDUCE PRICE TO 32c LB.

Brass, Wire Mill Products and Ingots Reduced; Lead, Zinc Uneventful; Spot Tin Supplies Tighten; Silver, Quicksilver Steady; Cobalt Lower

February 14, 1957

THE law of supply and demand exacted its penalty on copper during the month in review. Record production and only moderate demand resulted in price reductions by primary producers and custom smelters. All primary producers, by February 4, quoted their electro copper at 34.00c a pound delivered as against 36.00c previously. The 2.00c cut in the producer quotation followed on the heels of further reductions in custom smelter electro to 34.00c on January 30; on February 6 smelter electro was cut 1.00c to 33.00c and on February 13 another 1.00c to 32.00c. Were the domestic price of copper to drop below 29.00c a pound the Government would be obligated to take approximately 10,000 to 12,000 tons a month under its floor-price contracts. Similar copper price reductions were registered in foreign markets.

The lead and zinc markets were uneventful although the Government only took about half of the tonnages of both metals offered by domestic producers for delivery to the long-term stockpile in January. Lead was unchanged at 16.00c a pound New York and Prime Western zinc at 13.50c a pound East St. Louis.

Spot tin in the New York market was tight; spot Straits tin on February 14 was quoted at 102.50c a pound. Quicksilver and silver were unchanged, at \$255 to \$257 per flask of 76 pounds and 91.375c an ounce, respectively. Cobalt was again reduced, to \$2 a pound on February 1, and a major producer revised its ferrotungsten and tungsten powder prices.

Copper Prices Decline

The first crack in the primary producers' copper price occurred on February 1. Phelps Dodge Corp. reduced its price to 34.00c, the first cut in price by a large producer since October 24 of last year when the price was dropped from 40.00c to 36.00c a pound. Kennecott Copper took similar price action, also effective with shipments February 1, and Anaconda's dip to 34.00c became effective February 4.

The drop in the primary producers' price was no surprise in view of the fact that custom smelters at the time were quoting 34.00c (established on January 30) and making few sales while the price in London had dropped to the equivalent of 31.50c a pound. Unable to attract business at 34.00c, custom smelters again cut

their price another 1.00c, to 33.00c on February 6, and on February 13 by 1.00c again to 32.00c.

Gov't Floor-Priced Contracts

There has been considerable speculation in copper circles as to the floor-price level at which the U. S. Govern-

PRODUCERS, SMELTERS CUT COPPER PRICE TO 32c LB.

By February 19 all major primary producers had reduced their electro copper price to 32.00c a pound, down 2.00c; custom smelters had moved down to the 32.00c level on February 13. Brass and wire mills reduced their selling prices to reflect copper at 32.00c. On February 18 smelters cut their scrap copper buying prices to the basis of 24.625c a pound for No. 2 heavy copper and wire.

ment would be obligated to buy copper for the stockpile under the terms of agreements that the Defense Materials Procurement Agency made with producers as an incentive for them to open new properties.

The Brass Mill Industry Advisory Committee, at a meeting in Washington on February 13, was told by Business and Defense Services Administration officials that as a result of the high copper prices that prevailed in 1956, many of the producers were able to dispose of their output at levels that enabled them to recoup a specified percentage of their investment so that they have no further call on the Government.

However, there are still outstanding obligations with floor prices down to as low as 22.00c plus escalator provisions, so that if the price of copper were to drop to about 28.50c a pound, the Government would be obligated to buy between 10,000 and 15,000 tons of copper a month this year for the stockpile. At a still lower price level, the Government would have to take appreciably larger tonnages.

Foreign Prices Reduced

Among the foreign market price developments in copper were:

The Rhodesian Selection Trust's fixed price to British consumers was slashed £20 to £250 per long ton (equivalent to 31.25c a pound) on February 1. The London Metal Exchange's cash bid price at the close of February 14 was £249 a ton.

The International Nickel Co. of Canada reduced its price from 34.75c to 32.50c a pound (Canadian), f.o.b. Toronto, on February 1. The 32.50c Canadian level is equivalent to a 34.00c U. S. price.

Union Miniere du Haut Katanga, Belgium's largest copper producer, on February 14 reduced its price to the equivalent of 30.30c a pound f.a.s. New York, from the 31.20c price that had been in effect since February 4.

GIRM, the French agency that buys copper in the world market for resale to French consumers, on February 14 reduced its selling price to 251 francs per kilo, equivalent to

31.65c a pound f.a.s. New York. The previous equivalent of 32.43c had been set on February 7.

Scrap, Ingot Prices Lower

Domestic custom smelters also reduced their scrap copper buying prices. On February 14 they offered 25.25c a pound for No. 2 heavy copper and wire scrap, which would make the equivalent price 30.75c a pound for the electro copper refined from such scrap and which would be ready for marketing within 60 to 90 days.

Leading producers cut their brass and bronze ingot prices by 0.75c to 3.00c a pound on February 1. It was the second reduction in ingot prices within a short period, makers having previously cut them 1.00c to 3.00c a pound on January 23.

Copper consumers have been among the loudest complainers of the lack of demand for their end products. The Copper and Brass Research Association issued a statement on January 22 concerning the import situation as it affects the domestic copper and brass mill industry.

At its meeting with BDSA, the Brass Mill Advisory Committee said imported, low-cost brass mill products have reached a stage where they are injuring American brass mills.

January Copper Statistics

Domestic January copper statistics showed some improvement. Following are the January figures in tons with the December totals in parentheses: refined output, 139,150 (129,839); refined copper deliveries to domestic consumers, 119,925 (99,944); refined copper stocks held by producers at end of month, 118,564 (120,645).

The most surprising aspect of the figures were record-breaking deliveries of electro copper to consumers outside the U. S. The January total was 143,589, compared with 137,409 tons in December.

Chilean Copper Output

Chile's copper production in 1957 should reach a record 550,000 tons as compared with the all-time high of 440,000 tons turned out in 1956, according to Nilo Rosenberg, vice president of the Chilean Government's Copper Department. The Chilean official told a press conference at Santiago on February 7 that his country should have no trouble selling the copper on international markets despite current over-production; that the production increase will offset the effect of lower prices.

He said that Chile at present has no accumulated reserves of copper.

Lead, Zinc for Stockpile

Producers of domestic lead and zinc were somewhat surprised that the General Services Administration only took about half of the tonnages of both metals offered for delivery to

the long-term stockpile. (See Washington Report in this issue).

The lead market continued to display a fairly steady tone with producers reporting a slight improvement in the volume of business recently booked. Sales during the first week of each month usually are on the low side. Practically all of the business done, at 16.00c a pound New York and 15.80c St. Louis, was for February shipment.

Lead, Zinc Imports

Restriction of excess lead and zinc imports is the logical answer to the problems of domestic producers of these two metals, according to a mining industry spokesman. Otto Herres, chairman of the National Lead and Zinc Committee, at a meeting in Denver cautioned, however, that the limitations on imports should apply "only when and to the extent that they are offered at prices which will destroy our lead-zinc mining industry."

Mr. Herres asserted that "stockpile purchases and surplus agricultural commodity barter programs are proving inadequate for assurance to this country of a healthy mining industry in the uncertain years ahead."

Zinc Die Cast Alloys Cut

Leading manufacturers of zinc die casting alloys reduced their prices 0.50c a pound, effective January 30, thereby putting an end to the price uncertainty that had prevailed in that branch of the industry. The new price for the No. 2 alloy is 18.50c a pound in carload lots, delivered; 17.50c for the No. 3 and 18.00c for the No. 5 grade.

Earlier in January, some large producers of die casting alloys had granted price concessions in cases involving substantial tonnages where the buyers had entered into long-term contracts for the No. 3 alloy, with sales made as low as 16.75c a pound.

Demand for zinc was moderate

with most consumers limiting their purchases to carload lots for early shipment. Whatever business was placed was at the spot price of 13.50c a pound East St. Louis for the Prime Western grade.

Zinc Statistics

The zinc statistical picture in January left much to be desired. Shipments were down and unsold stocks carried by producers were up. There was a slight decrease in production, however, and a gain in unfilled orders on producers' books.

January statistics for all grades of zinc follow in tons, with the December totals in parentheses: output, 93,452 (98,234); shipments to consumers, for export and to the Government, 83,100 (99,797); shipments to consumers only, 67,273 (80,772); stocks held by producers at end of month, 78,974 (68,622), and unfilled orders on producers' books at end of month, 42,922 (34,913).

Spot Tin Tight

The available supply of Straits tin for spot delivery in the current market appeared to be very small and those having it were parcelling it out to favorite customers as an accommodation. The spot supply situation reflected the longshoremen's strike on the East Coast. Spot Straits tin was quoted at 102.50c (nominal) a pound N. Y. on February 14 as compared with the last previous price in this space of 101.125c for January 11. The high during the January 11-February 7 period was the 103.125c for January 31 while the low was the 101.125c of January 11.

A team of consultants from the New York firm of Ford, Bacon & Davis, assigned to examine Bolivia's nationalized mining industry, made 15 main points in a published report

at La Paz that added up to this conclusion: unless the Bolivian Government separates political activities from the administration of the country's mines, the entire mining industry will continue "to suffer the consequences."

1957 Aluminum Use

Consumption of aluminum in 1957 is expected to be up about eight per cent over that of 1956, according to E. M. Strauss, Jr., manager of commercial research for Aluminum Company of America. He said current supplies have at last caught up with demand, which is good for the stimulation of growth in our economy. Primary production capacity in the U. S. should top 2,500,000 tons by 1960, he said, a gain of some 40 per cent over 1956.

The 27.10c a pound price, f.o.b. was maintained for the 30-pound, 99 per cent plus primary aluminum ingot. There were some indications of a slightly firmer tone in secondary aluminum ingots. Scrap aluminum supplies were described as adequate but smelters asserted prices they obtain for their alloys are not commensurate with what they have to pay for scrap.

Quicksilver Unchanged

Spot quicksilver was unchanged at \$255 to \$257 per flask of 76 pounds. This range was established on November 14.

Silver Firm

The New York silver price was firmly maintained at 91.375c an ounce. This level was established on October 17, following an increase of 0.375c an ounce.

Cobalt Reduced 35c

African Metals Corp. reduced its cobalt price 35.00c a pound, effective February 1, to \$2 a pound in 500-pound kegs for the 98 to 99 per cent grade. The previous price of \$2.35 a pound had been in effect since December 1, following a reduction of 25.00c a pound.

Ferrotungsten Easier

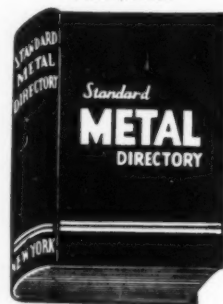
Electro Metallurgical Co. has revised its pricing basis for ferrotungsten and tungsten powder to that of a daily firm price basis and no longer on a contract basis. Sales of ferrotungsten were made on February 5 at \$2.95 a pound of contained tungsten for lots of 5,000 pounds or more; the price previously had been \$3.15 a pound. It was indicated sales of tungsten powder would be done at around \$4 per pound for 1,000-pound lots or more, as against \$4.20 previously.

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Publishers of "Metals"

Daily Metal Quotations in January, 1957

The following quotations are taken from the Daily Metal Reporter
(In Cents Per Pound)

	(In Cents per Pound)																		
	Copper		Tin Straits New York		Lead		Zinc		Alumi- num	Anti- mony	Silver								
	Producers' Price	Custom Smelters' or Outside Price	Electro R. o. b. Refinery	Lake Del.	Average Electrolytic Export Price F. a. s. N. Y.	Spot	Prompt	New York	Outside St. Louis	E. St. Louis	Prime West.	F. o. b. St. Louis	Brass Spec. F. o. b. St. Louis	High Grade Delivered	Spec. High Grade Delivered	30-Lb. Ingot (f. o. b.) 99% Plus	Domestic Spot 99.5% R. o. b. Laredo	(Cents Per Ounce) New York	
JANUARY																			
1	36.00	35.00	35.10	36.00	34.625	99.375	99.25	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375
2	36.00	35.00	35.10	36.00	34.625	99.75	99.625	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375
3	36.00	35.00	35.10	36.00	34.50	99.875	99.75	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375
4	36.00	35.00	35.10	36.00	34.50	99.50	99.50	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375
5	36.00	35.00	35.10	36.00	34.50	99.50	99.50	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375
6	36.00	35.00	35.10	36.00	34.50	99.50	99.50	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375
7	36.00	35.00	35.10	36.00	34.50	100.50	100.50	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375
8	36.00	35.00	35.10	36.00	34.50	100.50	100.50	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375
9	36.00	35.00	35.10	36.00	34.50	101.25	100.875	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375
10	36.00	35.00	35.10	36.00	34.50	101.125	100.875	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375
11	36.00	35.00	35.10	36.00	34.50	101.25	100.875	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375
12	36.00	35.00	35.10	36.00	34.50	101.25	101.00	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375
13	36.00	35.00	35.10	36.00	34.50	102.25	102.00	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375
14	36.00	35.00	35.10	36.00	34.50	102.125	101.875	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375
15	36.00	35.00	35.10	36.00	34.50	101.75	101.75	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375
16	36.00	35.00	35.10	36.00	34.50	101.75	101.75	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375
17	36.00	35.00	35.10	36.00	34.50	101.25	101.00	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375
18	36.00	35.00	35.10	36.00	34.50	101.25	101.00	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375
19	36.00	35.00	35.10	36.00	34.50	102.00	101.75	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375
20	36.00	35.00	35.10	36.00	34.50	102.00	101.75	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375
21	36.00	35.00	35.10	36.00	34.50	102.625	102.375	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375
22	36.00	35.00	35.10	36.00	34.50	102.625	102.375	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375
23	36.00	34.875	34.975	36.00	34.50	102.625	102.50	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375
24	36.00	34.75	34.975	36.00	34.50	102.75	102.625	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375
25	36.00	34.75	34.975	36.00	33.875	102.625	102.375	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375
26	36.00	34.75	34.975	36.00	33.875	102.50	102.375	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375
27	36.00	34.75	34.975	36.00	33.875	102.50	102.375	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375
28	36.00	34.75	34.975	36.00	33.375	102.625	102.375	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375
29	36.00	34.75	34.975	36.00	33.375	102.875	102.75	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375
30	36.00	34.00	34.60	36.00	33.375	102.875	102.75	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375
31	36.00	34.00	34.60	36.00	33.375	103.125	103.00	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375
AV.	36.00	34.87	35.031	36.00	34.31	101.511	101.347	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375
HI.	36.00	35.00	35.60	36.00	34.75	103.125	103.00	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375
LO.	36.00	34.00	33.60	36.00	33.25	99.375	99.25	16.00	15.80	13.50	14.00	13.75	14.85	13.75	14.85	15.25	27.10	33.00	91.375

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Zinc Consumption in '57 Expected to Exceed 1956

(Continued from Page 9)

Consumption

Table IV shows the consumption of zinc by industry for the period January 1952 to October 1956, inclusive. Figure 1 shows the same basic information for a longer period of time but in graphic form.

It is to be noted that the trends indicated in galvanizing and in die casting are particularly healthy. Zinc in die casting enjoys a permanently strong position because of its desirable characteristics including low melting temperature, adaptability to casting in thin sections, and the ease with which it can be finished. The continued growth of zinc used for galvanizing is evidence of an increasing awareness of the importance and cost of corrosion in our national economy, and that zinc is one of the most useful tools in fighting it. It is estimated that in 1956 well more than five and a half million tons of steel, in all forms, will be protected by a zinc coat as it is placed in service. A further factor is the increased use of zinc in continuous lines for galvanizing steel sheet, a process which was not significant ten years ago but today produces about 90 per cent of all such material.

Prices

As has been stated earlier, the basic price of Prime Western zinc f.o.b. East St. Louis was 13.00 cents as of January 1, 1956. The price was changed to 13.50 cents on January 6 and has persisted at that level since that time. Government purchases have served as a strong stabilizing influence. In addition to Government purchases for the stockpile from domestic producers, a barter program involving an exchange of foreign metal for surplus U. S. agricultural crops was initiated in the Spring with receipts at an increasing rate during the latter months of the year. It is estimated that the delivery of well over 100,000 tons of zinc has already been arranged under this barter program with final delivery scheduled in the early months of 1957.

The reader will recall from the Summer of 1954 that in lieu of a revision of the tariff structure, the Government agreed to purchase up to 300,000 tons of domestic zinc for stockpile. Total figures of accomplishment against this quota are not available, but it is very probable that the total has been nearly reached. It is

not known whether the Government will elect to extend stockpile purchases from domestic sources or substitute a continuation of the barter program or continue to purchase under both plans.

Washington Report

(Continued from Page 5)

Aluminum Set-Aside

The Business and Defense Services Administration on January 25 announced that 140,000,000 pounds of aluminum will be set aside from the total supply available in the second quarter of 1957 to fill Department of Defense and Atomic Energy Commission orders. This reserve is 3,000,000 pounds more than the amount set aside for similar orders in the first quarter of 1957.

Officials of BDSA's Aluminum and Magnesium Division said the increase reflects a change in military requirements. The second quarter figure represents 14 per cent of the anticipated supply of domestic and imported primary aluminum for that period, the same percentage as for the first quarter, 1957.

Fast Tax Writeoffs Upheld

The Supreme Court on January 23 upheld the Government's World War II policy of permitting fast amortization for tax purposes for less than the full cost of defense facilities. The high court's unanimous decision clears the way for the Government to reject more than three dozen claims which would have cost Uncle Sam \$62,000,000 in tax refunds. The companies contended they were entitled to fast amortization on the full cost of their defense facilities even though the writeoff certificates only covered a fraction of the cost.

The ruling specifically reversed a court of claims award of a \$178,000 tax refund to Allen-Bradley Co. In a companion case the court ruled that the Government properly allowed the National Lead Co. to take fast writeoffs on less than the full cost of defense facilities built during World War II.

1956 Mineral Output

The value of mineral production in the U. S. reached a new high of \$17,300,000,000 in 1956, a gain of more than a billion dollars over 1955, Secretary of the Interior Fred A. Seaton said in releasing a Bureau of Mines year-end report. The value of metals rose 9 per cent, compared with an 11 per cent gain for fuels and a 10 per cent rise for other non-metals.

The increase for metals was due

mainly to greater output of copper, lead and zinc. Offsetting the general upswing were drops in production and value for such metals as chromite, gold, iron ore, manganese ore, molybdenum, silver, and tungsten.

East Hemisphere Minerals

Sen. George W. Malone (Rep., Nev.) is directing for Congressional consideration a survey on minerals in the Eastern Hemisphere. A prior investigation "established the fact that the Western Hemisphere can be made self-sufficient in the production of the necessary critical minerals for war or peace," the Senator said.

The report on the European and Asiatic nations which includes Russia and the Balkans under Red control will correspond to Senate Report 1627 and Senate Document 83 of the available raw materials and the economic structure of each of the nations of the Western Hemisphere.

Uranium Output

Production of uranium ore and of uranium oxide in this country more than doubled in the last six months of 1956 over the corresponding 1955 period, the Atomic Energy Commission revealed in its 21st semi-annual report.

Flemming Resigns

The resignation of Arthur S. Flemming as Director of the Office of Defense mobilization was announced by President Eisenhower on February 6. Assistant Defense Secretary Gordon Gray will succeed Mr. Flemming.

British Metal Markets

(Continued from Page 13)

is prepared to dispose of. The market continues to hope that a considerable tonnage of g.o.b. will eventually be released, thus easing the tight position of this grade and enabling the wide backwardation in Metal Exchanges prices to be narrowed.

Whether events will pan out as hoped remains to be seen, especially as there is a danger that directly, or indirectly, any additional supplies from the Government here might merely result in increased quantities of zinc being bartered for U. S. farm produce.

Thanks to the above factors prices have held up pretty well, but on the consumption side the picture has not been too bright. The depression in the U. K. motor car industry has not given much sign of lifting. Here and there demand for cars seemed to be picking up, but early in February a strike at the Ford Motor Co.'s big works in Essex more than offset this. In other directions too the brass mills are not experiencing particularly brisk trading, and for the present galvanizing is the brightest spot.

Copper Statistics Reported by Copper Institute

Combined Totals in U. S. A. and Outside U. S. A.

(In tons of 2,000 pounds)

		Crude Production		Refined	Deliveries to Refined Stock		Stock Increases or Decreases		
		Primary	Secondary	Production	Customers	End of Period	Blister	Refined	Total
1955	Total	2,613,662	133,065	2,728,309	2,744,391	221,331	+18,418	-8,552	+11,112
1956									
Jan.		233,897	11,250	237,300	242,425	217,315	+7,847	-4,016	+3,831
Feb.		228,409	11,355	243,458	236,841	226,686	-193	+9,371	+9,178
Mar.		243,676	14,293	258,462	261,814	225,827	-493	-859	-1,352
Apr.		232,986	14,716	254,462	242,244	238,125	-6,760	+12,298	+5,538
May		237,177	18,608	269,846	256,245	252,130	-14,061	+12,161	-1,900
June		238,814	11,360	251,382	236,714	266,221	+1,309	+14,091	+15,130
July		233,182	11,174	240,633	198,800	303,225	+3,723	+37,004	+40,727
Aug.		241,295	10,005	242,814	224,546	315,572	+8,486	+12,347	+20,833
Sept.		221,401	8,126	217,522	219,479	309,351	+12,005	-6,221	+5,784
Oct.		255,442	13,924	263,752	234,080	333,952	+5,614	+24,801	+30,215
Nov.		249,360	10,204	254,377	239,181	345,181	+5,187	+11,229	+16,416
Dec.		236,512	13,124	250,173	237,003	354,420	-537	+9,239	+8,702
Total		2,862,839	152,536	2,987,060	2,830,407	354,420	+28,415	+133,089	+161,402
1957									
Jan.		240,483	15,366	256,630	263,514	344,373	-781	-10,047	-10,828

In U. S. A.

1955	Total	1,036,702	124,760	1,467,448	1,446,354	61,554		+14,446	
1956									
Jan.		96,732	10,353	123,917	130,431	50,016		-11,538	
Feb.		89,326	11,697	127,917	139,383	47,053		-2,963	
Mar.		99,681	12,596	144,027	141,590	51,595		+4,542	
Apr.		95,499	13,780	140,032	139,927	54,887		+3,292	
May		101,422	17,475	145,740	142,961	56,208		-523	
June		98,496	12,471	136,713	131,299	60,671		+4,463	
July		84,787	10,387	125,401	97,698	87,944		+27,273	
Aug.		91,282	9,545	122,108	109,618	96,456		+8,506	
Sept.		88,659	7,367	112,484	104,486	93,202		-3,248	
Oct.		95,109	12,621	136,379	113,353	106,120		+12,918	
Nov.		90,573	8,940	132,970	114,524	116,516		+10,396	
Dec.		92,231	12,352	129,839	99,594	120,645		+4,129	
Total		1,133,134	139,584	1,580,287	1,465,899	120,645		+50,091	
1957									
Jan.		94,944	14,535	139,150	119,925	118,564		-2,081	

Outside U. S. A.*

1955	Total	1,576,960	8,305	1,260,861	1,298,037	159,777		-21,752	
1956									
Jan.		137,165	897	113,502	111,994	167,299		+7,522	
Feb.		138,918	1,808	115,541	97,458	179,633		+12,334	
Mar.		143,995	1,697	114,435	120,224	174,232		-5,401	
Apr.		137,487	936	114,430	102,317	183,238		+9,006	
May		135,755	1,133	124,106	113,284	195,922		+12,684	
June		140,318	1,136	114,669	105,415	205,550		+9,628	
July		148,395	787	115,232	101,102	215,281		+9,731	
Aug.		150,013	460	120,706	114,928	219,122		+3,841	
Sept.		132,742	759	105,038	114,993	216,149		-2,972	
Oct.		160,333	1,303	127,373	120,727	227,832		+11,683	
Nov.		158,787	1,264	121,407	124,657	228,665		+833	
Dec.		144,281	772	120,334	137,409	233,775		+5,110	
Total		1,729,705	12,952	1,406,773	1,364,508	233,775		+73,998	
1957									
Jan.		145,539	831	117,480	143,589	225,809		-7,966	

* Excluding Russia, Yugoslavia, Norway, Sweden, Japan and Australia.

Electrolytic Copper

Producers' Price, Del. Valley
Monthly Average Prices
(Cents Per Pound)

	1954	1955	1956	1957
Jan.	29.88	30.24	43.00	36.00
Feb.	29.88	33.00	44.03	....
Mar.	29.93	33.222	46.00	....
Apr.	29.98	36.00	46.00	....
May	30.00	36.00	46.00	....
June	30.00	36.00	46.00	....
July	30.00	36.00	41.56	....
Aug.	30.00	37.81	40.00	....
Sept.	30.00	43.00	40.00	....
Oct.	30.00	43.00	39.308	....
Nov.	30.00	43.00	36.00	....
Dec.	30.00	43.00	36.00	....
Ave.	29.27	37.522	41.992	....

Electrolytic Copper

Custom Smelters' Price, Del. Valley
Monthly Average Prices
(Cents Per Pound)

	1954	1955	1956	1957
Jan.	29.75	30.48	50.22	34.87
Feb.	29.75	33.00	52.07	....
Mar.	29.866	33.667	53.11	....
Apr.	29.965	36.00	48.88	....
May	30.00	36.00	44.221	....
June	30.00	36.00	40.00	....
July	30.00	36.00	38.14	....
Aug.	30.00	40.14	39.32	....
Sept.	30.00	50.00	39.00	....
Oct.	30.00	45.99	37.192	....
Nov.	30.00	45.84	35.96	....
Dec.	30.00	49.42	35.45	....
Aver.	29.944	39.38	42.797	....

Lake Copper

Producers' Price Delivered
Monthly Average Prices
(Cents Per Pound)

	1954	1955	1956	1957
Jan.	30.00	30.12	43.00	36.00
Feb.	30.00	33.00	43.783	....
Mar.	30.00	33.56	46.00	....
Apr.	30.00	36.00	46.00	....
May	30.00	36.00	46.00	....
June	30.00	36.00	46.00	....
July	30.00	36.00	41.68	....
Aug.	30.00	37.46	40.00	....
Sept.	30.00	43.00	40.00	....
Oct.	30.00	43.00	39.321	....
Nov.	30.00	43.00	36.00	....
Dec.	30.00	43.00	36.00	....
Aver.	30.00	37.51	41.975	....

Fabricators' Copper Statistics

(In tons of 2,000 pounds)

	Fabricators' Stocks of Refined Cop.	Unfilled Purchases of Refined by Fab. from Producers	Fabricators' Working Stocks	Unfilled Sales by Fabricators to Customers	Actual Copper Consumed by Fabricators	Excess Fabricators' Stocks Over Orders Bkd.
1951						
Total	280,402	32,147	295,385	303,050	1,392,111	-285,886
1952						
Total	333,455	32,652	292,157	275,312	1,389,451	-201,362
1953						
Total	380,881	25,022	309,664	170,917	1,375,869	-74,678
1954						
Sept.	341,726	50,650	300,603	148,515	106,628	-56,742
Oct.	330,787	50,240	299,068	135,140	116,232	-53,181
Nov.	335,315	55,517	301,097	137,076	114,392	-47,341
Dec.	360,526	58,125	304,619	136,581	99,479	-22,549
Total	.....	.....	.....	.....	1,232,090	.....
1955						
Jan.	334,105	66,122	302,658	159,016	136,539	-61,447
Feb.	323,425	75,840	301,597	180,898	118,786	-83,230
Mar.	311,235	85,859	301,937	187,827	143,544	-92,670
Apr.	316,575	88,992	304,117	205,308	115,073	-103,858
May	327,343	111,715	309,219	323,279	113,485	-102,440
June	327,696	126,703	309,972	234,578	132,377	-90,151
July	312,587	165,505	301,048	286,095	75,846	-109,051
Aug.	304,097	150,854	303,089	283,653	97,688	-181,791
Sept.	334,996	133,391	314,111	270,102	113,628	-115,826
Oct.	353,469	135,075	313,048	275,255	115,453	-99,759
Nov.	373,314	139,855	313,779	282,963	122,332	-84,563
Dec.	389,974	139,094	314,145	293,264	127,006	-78,341
Total	.....	.....	.....	.....	1,412,287	.....
1956						
Jan.	376,753	143,815	312,128	305,942	138,711	-97,502
Feb.	388,823	135,637	319,279	282,314	130,923	-77,133
Mar.	392,143	140,348	319,056	291,465	135,746	-78,030
Apr.	413,979	135,071	319,247	266,239	118,839	-36,436
May	435,083	131,023	318,592	249,352	122,553	-1,838
June	451,126	114,223	324,970	227,097	113,835	+13,282
July	465,015	109,040	334,584	220,810	81,275	+18,661
Aug.	457,679	115,295	338,818	221,975	117,937	+12,181
Sept.	445,679	114,981	338,488	204,154	115,867	+18,018
Oct.	440,706	112,893	336,856	198,517	119,440	+18,226
Nov.	435,216	110,792	335,829	178,814	119,441	+31,365
Dec.	437,187	117,601	336,217	183,834	99,223	+34,737
Total	.....	.....	.....	.....	1,416,278	.....

Scrap Copper Receipts by Custom Smelters and Refineries in United States*

(In Short Tons)

	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
Jan.	10,172	17,084	15,763	6,640	4,528	6,486	9,859	11,047	14,322	17,506
Feb.	11,890	20,238	12,500	5,153	3,633	10,337	8,490	15,198	14,497	.....
Mar.	11,954	20,678	13,538	7,912	5,243	19,991	9,738	12,198	15,921	.....
Apr.	15,125	15,968	12,304	8,553	6,214	16,583	9,004	13,162	17,233	.....
May	16,357	14,237	8,749	8,458	8,033	10,857	8,687	15,133	20,805	.....
June	11,178	8,809	20,523	6,828	4,425	10,945	13,309	14,765	14,758	.....
July	8,370	7,782	10,040	6,642	5,188	9,063	10,260	9,988	12,632	.....
Aug.	17,081	8,246	10,452	6,113	5,003	7,137	10,100	12,197	12,510	.....
Sept.	16,001	10,980	4,903	3,561	4,667	9,042	10,641	15,037	9,518	.....
Oct.	10,854	6,401	9,459	3,336	4,602	10,065	11,662	12,897	15,570	.....
Nov.	7,625	15,347	9,237	3,179	4,724	7,815	10,879	9,865	11,369	.....
Dec.	11,826	10,533	7,178	4,538	6,208	11,476	14,876	13,180	14,613	.....
Total	112,386	147,933	156,303	142,067	71,812	62,370	129,798	127,449	154,714	173,748

6 As compiled by Copper Institute.

Brass and Bronze Ingot Monthly Shipments

(Net Tons)

The following figures showing the combined shipments of ingot brass and bronze are compiled by the Ingot Brass and Bronze Industry and represent in excess of 95 per cent of the deliveries of the entire industry.

	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
Jan.	29,196	27,841	26,998	19,456	18,874	28,416	28,315	24,423	20,661	25,201	27,736
Feb.	24,580	24,696	22,487	15,026	18,487	27,168	24,211	26,429	19,920	26,349	24,949
Mar.	27,178	27,477	24,282	14,550	22,494	41,997	23,890	28,256	23,652	29,713	28,310
Apr.	30,228	24,677	25,177	10,695	22,118	40,472	22,647	25,044	24,746	27,641	25,808
May	27,338	19,525	22,716	11,114	23,648	33,267	21,740	21,660	22,269	23,708	23,437
June	31,849	16,929	24,401	9,696	25,083	33,817	21,274	20,818	22,348	23,141	18,842
July	26,877	16,728	20,456	10,229	21,609	32,016	18,947	19,321	17,074	18,513	17,364
Aug.	27,898	18,589	24,098	14,194	26,659	25,255	21,807	20,158	21,684	27,018	23,812
Sept.	27,390	19,025	23,641	16,208	28,811	22,285	22,770	21,463	22,464	26,349	20,929
Oct.	31,461	22,806	21,559	18,026	32,240	23,124	25,811	22,280	24,080	25,228	23,045
Nov.	27,296	23,862	20,954	17,960	28,575	20,987	22,983	20,541	21,274	21,448	18,046
Dec.	27,296	23,862	20,954	17,960	28,575	20,987	22,983	20,541	21,274	21,448	18,046
Total	339,724	263,711	279,500	175,643	303,563	332,378	277,736	271,251	263,233	298,406	274,096
Aver.	28,310	21,976	23,292	14,637	25,297	27,615	23,145	22,604	21,936	24,867	22,841

METALS, FEBRUARY, 1957

Mine Production of Copper in United States

(U. S. Bureau of Mines)

(In short tons)

	Eastern	Missouri	Western	Total
1953				
Ttl.	38,900	2,374	885,174	926,448
1954				
Ttl.	40,302	1,925	793,241	835,472
1955				
May	4,606	199	86,019	90,824
June	5,192	189	84,011	89,392
July	4,678	169	28,496	33,343
Aug.	5,028	125	62,082	67,235
Sept.	6,928	130	83,213	90,271
Oct.	6,552	195	85,445	92,192
Nov.	6,188	184	84,681	91,053
Dec.	6,758	179	81,638	88,575
Ttl.	68,622	2,140	921,838	992,600
1956				
Jan.	6,674	163	87,682	94,519
Feb.	6,688	164	82,560	89,412
Mar.	7,347	198	90,398	97,943
Apr.	6,821	195	88,594	95,610
May	6,960	191	92,513	99,664
June	6,720	173	88,041	94,931
July	6,132	185	74,298	80,615
Aug.	6,638	219	85,221	92,078
Sept.	6,195	163	79,893	85,251
Oct.	6,405	183	84,071	93,659
Nov.	6,359	176	81,983	88,518

Average Custom Smelters' Scrap Buying Prices

(Cents per pound for carload lots del.

consumers' works)

	No. 1 Copper Scrap	No. 2 Copper Scrap	Light Copper Scrap	Re-refinery Brass*
1955				
Nov.	40.08	38.58	36.33	36.34
Dec.	42.75	41.25	38.79	38.71
Av.	37.035	35.535	33.59	32.70
1956				
Jan.	42.39	40.89	38.42	38.26
Feb.	43.35	41.85	39.35	38.65
Mar.	45.77	44.27	41.77	41.02
Apr.	41.65	40.15	37.65	38.15
May	36.06	34.56	32.06	32.50
June	33.32	31.82	29.32	29.03
July	32.69	31.19	28.69	28.98
Aug.	34.269	32.769	30.269	30.75
Sept.	33.56	32.06	29.81	29.92
Oct.	30.964	29.464	27.214	27.44
Nov.	30.51	29.01	26.76	27.50
Dec.	30.423	28.923	26.673	27.42
Av.	36.25	34.75	32.33	32.47
1957				
Jan.	29.30	27.80	25.55	26.30

*Of dry content for material having a dry copper content in excess of 60%.

Brass Ingot Makers' Scrap Copper Buying Prices

(Average Prices)

(Cents per pound del. refinery for 60,000 lbs. of each grade)

	No. 1 Copper Scrap	No. 2 Copper Scrap	No. 1 Composition	Heavy Yellow Brass
1955				
Nov.	40.08	38.58	33.15	22.53
Dec.	43.58	41.22	34.84	24.22
Av.	36.63	35.02	29.905	22.35
1956				
Jan.	42.39	40.89	35.22	24.51
Feb.	43.35	41.85	34.72	24.79
Mar.	45.77	44.27	36.46	27.76
Apr.	41.65	40.15	34.40	24.49
May	36.06	34.56	29.58	19.89
June	33.32	31.82	26.37	18.40
July	32.69	31.19	26.89	18.43
Aug.	34.269	32.769	29.833	20.463
Sept.	33.26	32.25	30.07	20.92
Oct.	30.687	29.187	28.058	19.538
Nov.	30.39	28.89	26.69	18.91
Dec.	30.195	28.695	27.50	18.96
Av.	36.17	34.67	30.483	21.34
1957				
Jan.	29.27	27.77	26.59	18.55

United States Lead Statistics of Primary Refineries

(American Bureau of Metal Statistics)
(In tons of 2,000 lbs.)

	Stock At Beginning	Production Primary & Secondary	Total Supply	Stock At End	Domestic Shipments
1952	25,339	532,778	558,117	43,560	492,091
1953	43,560	533,883	577,443	81,152	488,437
1954	81,152	551,618	632,770	92,719	475,551
1955					
March	64,938	50,308	115,246	59,881	42,381
April	59,881	50,274	110,155	54,956	44,878
May	54,956	45,435	100,391	50,947	46,130
June	50,947	48,150	99,097	44,665	44,985
July	44,665	23,850	68,515	39,856	26,547
August	39,856	36,912	76,768	34,111	41,469
September	34,111	50,453	84,564	30,753	46,250
October	30,753	53,747	84,500	29,913	52,062
November	29,913	52,623	82,536	28,855	51,370
December	28,855	50,448	79,303	31,089	48,171
Total		547,153	639,872		531,339
1956					
January	31,089	51,306	82,395	32,469	49,746
February	32,469	49,475	81,944	41,450	39,411
March	41,450	54,174	95,624	52,089	39,344
April	52,089	52,976	105,065	53,958	44,986
May	53,958	47,961	101,919	50,460	40,703
June	50,460	47,367	97,827	45,951	41,458
July	45,951	48,479	94,430	49,134	36,483
August	49,134	48,404	97,538	39,304	48,404
September	39,304	53,530	92,834	40,542	47,519
October	40,542	54,815	95,357	42,314	45,254
November	42,314	50,744	93,058	37,192	47,349
December	37,192	54,063	91,254	41,181	44,191
Total		613,293	644,382		529,484

In instances where the figures are not in balance it is due to shipments to other than domestic consumers.

Industrial Classification of Domestic Lead Shipments

(American Bureau of Metal Statistics)

(In tons of 2,000 lbs.)

	Cable	Amm.	Foil	Batt'y	Brass Making	Sun- dries	Job- bers	Unclassified
1950	66,646	28,854	3,304	93,297	6,374	60,118	10,450	230,594
1951	70,149	32,099	2,063	75,837	5,583	48,248	3,550	259,155
1952	74,616	30,809	1,374	77,238	5,160	50,943	5,671	246,283
1953	76,283	34,415	2,136	80,339	5,716	55,936	6,390	227,222
1954								
July	4,000	1,500	...	6,690	415	4,121	861	19,608
Aug.	8,799	3,358	146	6,111	838	5,377	1,152	17,621
Sept.	4,602	1,653	564	4,110	20	4,667	851	14,424
Oct.	6,142	1,970	657	4,172	383	4,581	829	17,573
Nov.	5,816	3,795	333	3,898	520	3,202	721	16,628
Dec.	7,707	1,880	100	5,790	141	3,530	906	16,963
Total	75,412	30,246	2,811	66,088	5,192	57,369	9,170	229,264
1955								
Jan.	7,044	1,570	36	5,158	213	4,451	857	21,122
Feb.	5,869	3,200	348	6,758	289	4,796	1,013	24,373
Mar.	6,538	2,340	614	6,897	240	3,807	1,167	20,778
Apr.	5,909	2,625	201	6,533	463	5,178	1,234	22,735
May	6,145	2,950	251	8,127	321	4,435	1,145	22,756
June	6,623	950	50	6,833	290	5,175	1,293	23,816
July	2,313	150	307	4,365	100	3,763	946	14,603
Aug.	5,772	2,800	210	4,794	290	3,741	1,230	22,632
Sept.	6,552	2,295	415	7,794	354	4,711	1,149	22,980
Oct.	6,772	3,026	85	9,819	564	4,899	1,287	25,610
Nov.	6,606	2,433	70	13,875	387	3,795	874	23,330
Dec.	6,275	3,260	35	7,508	449	4,289	839	25,516
Total	72,418	27,599	2,622	88,461	3,960	52,994	13,034	270,251
1956								
Jan.	7,777	3,075	200	6,555	290	8,538	917	22,394
Feb.	5,974	2,435	384	5,983	275	3,592	871	19,897
Mar.	6,786	1,300	101	4,903	321	3,915	1,331	20,687
Apr.	6,744	2,950	310	4,839	260	3,522	1,376	24,985
May	6,490	2,825	...	5,027	131	3,513	964	21,753
June	8,502	2,150	...	4,167	186	3,645	1,021	21,787
July	3,497	904	...	5,007	80	2,859	1,453	22,683
Aug.	7,712	1,497	85	6,334	713	4,443	1,262	26,358
Sept.	6,354	1,850	135	6,303	230	5,038	1,339	26,270
Oct.	7,988	1,715	135	7,108	286	4,955	1,493	21,574
Nov.	6,096	2,351	...	8,556	226	5,573	792	23,755
Dec.	6,440	1,449	85	5,832	160	7,258	394	22,573
Total	80,360	24,501	1,435	70,614	3,158	56,851	13,213	274,716

Lead Prices at New York

(Common Grade)

Monthly Average Prices
(Cents per pound)

	1954	1955	1956	1957
Jan.	13.26	15.00	16.16	16.00
Feb.	12.82	15.00	16.00	...
Mar.	12.94	15.00	16.00	...
Apr.	13.91	15.00	16.00	...
May	14.00	15.00	16.00	...
June	14.11	15.00	16.00	...
July	14.00	15.00	16.00	...
Aug.	14.06	15.00	16.00	...
Sept.	14.60	15.12	16.00	...
Oct.	14.975	15.50	16.00	...
Nov.	15.00	15.50	16.00	...
Dec.	15.00	15.56	16.00	...
Av.	14.06	15.14	16.013	...

Lead Sheet Prices

(To Jobbers, Full Sheets)

Monthly Average Prices
(Cents per pound)

	1954	1955	1956	1957
Jan.	18.26	20.00	21.66	21.50
Feb.	17.82	20.00	21.50	...
Mar.	17.94	20.00	21.50	...
Apr.	18.91	20.00	21.50	...
May	19.00	20.00	21.50	...
June	19.11	20.00	21.50	...
July	19.00	20.00	21.50	...
Aug.	19.06	20.00	21.50	...
Sept.	19.60	20.12	21.50	...
Oct.	19.975	20.50	21.50	...
Nov.	20.00	20.50	21.50	...
Dec.	20.00	20.56	21.50	...

Battery Shipments

The following table shows replacement battery shipments in the United States as compiled by the Business Information Division of Dun & Bradstreet, Inc., for the Association of American Battery Manufacturers.

(In thousands of units)

	1953	1954	1955	1956
Jan. ..	1,571	1,788	1,478	2,005
Feb. ..	1,162	1,422	1,647	1,305
Mar. ..	1,202	1,194	1,321	1,313
Apr. ..	1,245	1,150	1,281	1,331
May ..	1,455	1,391	1,572	1,714
June ..	2,004	1,834	1,794	1,760
July ..	2,528	2,288	2,024	2,121
Aug. ..	2,707	2,481	2,777	2,532
Sept. ..	2,852	2,728	3,073	2,710
Oct. ..	2,825	2,667	3,036	3,015
Nov. ..	2,173	2,410	2,622	2,594
Dec. ..	1,890	1,796	2,556	2,266
Total	23,614	23,149	25,147	24,666

METALS, FEBRUARY, 1957

Lead Stocks at Primary U. S. Smelters and Refiners

(American Bureau of Metal Statistics)
(In tons of 2,000 lbs.)

	In ore and matte and in process at smelters	— In base bullion (lead content) — At smelters & refineries	In transit to refineries	In process at refineries	Refined pig lead	Anti- monial lead	Total Stocks
1954							
Oct. 1	63,731	18,771	4,155	29,024	79,190	14,168	209,039
Nov. 1	59,660	17,095	3,265	28,373	80,650	14,846	203,889
Dec. 1	57,452	16,888	2,570	27,816	79,814	14,573	199,113
1955							
Jan. 1	62,074	18,170	1,723	27,164	77,930	14,789	201,850
Feb. 1	59,303	15,485	3,133	29,393	69,980	14,902	192,196
Mar. 1	64,492	17,741	3,781	28,467	52,734	12,204	179,419
Apr. 1	57,577	20,063	2,309	28,564	47,496	12,385	168,394
May 1	59,686	17,468	3,496	26,373	43,207	11,749	160,979
June 1	59,632	17,705	1,941	27,979	39,892	11,055	158,204
July 1	58,182	14,707	2,941	30,579	34,432	10,233	151,074
Aug. 1	65,476	10,065	1,303	26,792	30,077	9,779	143,492
Sept. 1	75,057	17,183	3,744	29,660	26,859	7,252	159,755
Oct. 1	70,628	19,083	4,217	28,424	23,292	7,461	153,105
Nov. 1	71,257	20,682	4,276	28,596	21,828	8,085	154,724
Dec. 1	64,109	20,232	4,377	27,486	19,592	9,263	145,059
1956							
Jan. 1	71,812	16,532	3,764	27,625	21,196	9,893	150,822
Feb. 1	70,690	19,082	1,764	25,632	24,080	8,389	149,637
Mar. 1	71,023	16,406	2,583	27,519	32,355	9,095	158,981
Apr. 1	72,358	15,655	2,152	28,065	41,800	10,289	170,319
May 1	74,837	15,500	2,718	24,181	43,268	10,690	171,194
June 1	78,987	15,477	2,475	26,682	39,558	10,902	174,081
July 1	81,796	15,837	4,423	28,505	36,499	9,452	176,512
Aug. 1	76,985	16,856	3,516	29,603	38,210	10,924	176,094
Sept. 1	81,634	18,529	2,874	29,991	29,230	10,074	172,332
Oct. 1	77,787	15,991	4,413	28,083	29,361	11,181	166,816
Nov. 1	78,253	12,022	3,083	25,783	30,932	11,382	161,485
Dec. 1	82,197	9,095	4,132	25,627	25,360	11,832	158,243
1957							
Jan. 1	77,918	12,222	2,846	25,092	29,435	11,746	159,249

Receipts of Lead in Ore and Scrap By U. S. Smelters (a)

(American Bureau of Metal Statistics)

(In tons of 2,000 lbs.)

	Receipts of lead in ore			Receipts of lead in scrap etc. (b)	Total receipts in ore, & scrap
	United States	Foreign	Total		
1952 Total	405,990	98,276	504,266	41,845	546,111
1953 Total	351,183	155,788	506,971	42,994	549,965
1954 Total	336,291	158,081	494,372	49,864	544,236
1955					
January	28,767	11,502	40,269	3,509	43,778
February	27,456	17,400	44,856	2,738	47,594
March	30,056	11,104	41,160	3,291	44,451
April	28,707	16,347	45,054	3,249	48,303
May	28,511	13,377	41,888	4,879	48,767
June	28,273	14,667	42,940	4,509	47,449
July	23,027	3,826	26,853	649	27,502
August	30,249	11,859	42,108	3,942	46,050
September	29,377	14,881	44,258	3,623	47,881
October	30,073	20,845	50,918	5,655	56,573
November	27,736	13,022	40,758	3,802	44,560
December	29,363	24,136	53,499	3,150	56,649
Total	341,595	172,966	514,561	42,996	557,557
1956					
January	27,184	15,704	42,888	6,346	49,234
February	28,569	16,528	45,097	4,577	49,674
March	31,568	17,904	49,472	3,989	53,461
April	31,786	15,224	47,010	4,252	51,262
May	32,715	18,476	51,191	4,711	55,902
June	31,546	16,251	47,797	4,541	52,338
July	29,964	13,476	43,440	3,207	46,647
August	31,112	20,726	51,838	5,885	57,723
September	28,731	16,276	45,007	3,351	48,358
October	33,614	12,350	45,964	5,439	51,403
November	30,553	14,308	44,861	5,141	50,002
December	31,154	15,095	46,252	4,536	50,788
Total	368,499	192,318	560,817	55,925	616,792

(a) Receipts of lead in ore are computed on the basis of recoverable lead. Owing to the estimational factor in this, which is probably on the low side, and also to the possibility that some lead receipts may escape attention, these monthly totals probably underrun the actual production of pig lead. (b) Includes only of scrap smelted in connection with ore, plus some scrap received by primary refineries.

METALS, FEBRUARY, 1957

N. Y. Lead Price Changes (Effective Date)

1949	1953
Nov. 16....12.50	Jan. 7....14.50
Nov. 21....12.00	Jan. 12....14.00
1950	Feb. 2....13.50
Mar. 9....11.00	Mar. 4....13.00
Mar. 14....10.50	Mar. 10....13.50
Apr. 20....10.75	Apr. 7....13.00
Apr. 26....11.00	Apr. 16....12.50
May 4....11.25	Apr. 21....12.00
May 10....11.50	Apr. 29....12.50
May 11....12.00	May 18....12.75
June 23....11.50	May 19....13.00
1951	May 26....13.15
June 28....11.00	June 11....13.50
July 12....11.50	July 20....13.75
July 13....12.00	July 23....14.00
Aug. 15....13.00	Sept. 16....13.50
Aug. 21....14.00	1954
Sept. 1....15.00	Jan. 18....13.00
Sept. 8....16.00	Feb. 18....12.50
Oct. 2...19.00	Mar. 9....12.75
Oct. 31....17.00	Mar. 10....13.00
1952	Mar. 26....13.25
Apr. 29....18.00	Mar. 29....13.50
May 2....17.00	Apr. 1....13.75
May 12....15.00	Apr. 12....14.00
June 23....15.50	June 2....14.25
June 24....16.00	June 15....14.00
Oct. 7....15.00	Aug. 25....14.25
Oct. 14....14.00	Sept. 7....14.50
Oct. 22....13.50	Sept. 15....14.75
Nov. 3....14.00	Oct. 4....14.875
Nov. 10....14.25	Oct. 5....15.00
Nov. 11....14.50	1955
Nov. 20....14.25	Oct. 23....15.00
Nov. 24....14.00	15.50
Dec. 22....14.25	Oct. 26....15.50
Dec. 29....14.50	Dec. 29....16.00
Dec. 31....14.75	1956
	Jan. 4....16.50
	Jan. 13....16.00

*OPA Ceiling. †Returned to OPA Ceiling.
**OPS Ceiling.

Antimonial Lead Stocks at Primary Refineries (A. B. M. S.)

	(In tons of 2,000 lbs.)			
End of:	1953	1954	1955	1956
Jan.	11,572	14,691	14,902	8,389
Feb.	10,736	14,798	12,204	9,095
Mar.	11,484	11,985	12,385	10,289
Apr.	11,248	11,977	11,740	10,690
May	10,764	11,882	11,055	10,902
June	14,335	9,798	10,233	9,452
July	14,247	12,210	9,779	10,924
Aug.	14,748	12,279	7,252	10,074
Sept.	15,877	14,168	7,461	11,181
Oct.	15,742	14,846	8,085	11,382
Nov.	16,498	14,573	9,263	11,832
Dec.	16,116	14,789	9,893	11,746

Antimonial Lead Production by Primary Refineries (A. B. M. S.)

	(In tons of 2,000 lbs.)			
End of:	1953	1954	1955	1956
Jan.	2,937	3,768	4,529	5,045
Feb.	3,682	4,257	4,777	5,888
Mar.	5,353	4,475	6,202	5,526
Apr.	5,027	4,470	5,343	5,818
May	6,497	4,373	4,737	5,405
June	9,270	3,796	4,792	4,456
July	5,259	5,991	1,153	3,853
Aug.	4,668	6,455	2,946	5,342
Sept.	5,509	5,869	6,650	6,709
Oct.	5,100	5,532	8,016	5,378
Nov.	5,400	5,364	7,985	6,993
Dec.	3,060	5,255	6,907	5,766

Total 61,762 59,875 64,037 66,180

U. S. Lead Consumption

(Bureau of Mines—In Short Tons)

Metal Products:	1956		
	Jan.-Nov.	Oct.	Nov.
Ammunition	41,258	4,450	3,204
Bearing metals	25,425	2,530	2,186
Brass and bronze	24,677	2,224	2,078
Cable covering	123,002	12,403	10,474
Caulking lead	56,240	5,699	4,850
Casting metals	10,705	804	934
Collapsible tubes	9,443	841	730
Foil	4,230	400	476
Pipes, traps and bends	24,936	2,467	2,024
Sheet lead	27,636	2,537	2,413
Solder	65,135	6,045	5,445
Storage battery grids, posts, etc.	171,776	*18,654	16,879
Storage battery oxides	163,543	*17,454	16,489
Terne metal	1,424	185	222
Type metal	21,337	2,342	2,363
Total	770,767	79,935	70,767
Pigments:			
White lead	15,797	1,352	1,529
Red lead and litharge	72,252	6,730	6,440
Pigment colors	12,587	1,323	1,220
Other†	5,086	498	519
Total	105,722	9,903	9,708
Chemicals:			
Tetraethyl lead	180,396	17,180	17,218
Miscellaneous chemicals	2,416	203	17
Total	182,812	17,383	17,235
Miscellaneous uses:			
Annealing	4,510	542	387
Galvanizing	1,350	185	105
Lead plating	647	29	45
Weights and ballast	5,587	572	422
Total	12,094	1,328	959
Other uses:			
Unclassified	14,173	1,461	1,324
Total reported	*11,085,568	*109,110	*99,993
Estimated unreported consumption	11,000	1,000	1,000
Grand total	*11,096,600	*110,100	*101,000
Daily average\$	3,283	3,552	3,367

* Revised.
† Includes lead content of leaded zinc oxide production.
‡ Includes lead content of scrap used directly in fabricated products.
§ Based on number of days in month without adjustment for Sundays or holidays.

Consumers' Lead Stocks, Receipts and Consumption

(Bureau of Mines — In Short Tons)

	Stocks Oct. 31, 1956	Net Receipts in Nov.	Consumed in Nov.	Stocks Nov. 30, 1956
Soft lead	*60,204	56,847	63,259	53,792
Antimonial lead	*41,744	24,889	27,314	39,319
Lead in alloys	8,831	2,360	3,323	7,868
Lead in copper-base scrap ..	1,974	1,514	1,607	1,881
Total	*112,753	85,610	*95,503	102,860

* Revised.

† Excludes 3,983 tons of lead which went directly from scrap to fabricated products and 507 tons of lead contained in leaded zinc oxide production.

Consumption of Lead by Class of Product

(Bureau of Mines — In Short Tons)

NOVEMBER

	Soft lead	Antimonial lead	Lead in alloys	Lead in copper-base scrap	Total
Metal products	34,594	27,016	3,260	1,607	66,477
Pigments	9,699	9	.....	.....	9,708
Chemicals	17,235	.....	.....	.....	17,235
Miscellaneous	647	112	.....	.....	759
Unclassified	1,084	177	63	.....	1,324
Total	63,259	27,314	3,323	1,607	*95,503

† Excludes 3,983 tons of lead which went directly from scrap to fabricated products and 507 tons of lead contained in leaded zinc oxide production.

U. K. Lead Consumption

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 pounds)

	1954	1955	1956
Jan.	25,786	29,062	31,012
Feb.	25,837	28,926	30,125
Mar.	29,442	33,225	30,099
Apr.	25,820	28,656	28,186
May	28,637	31,092	29,752
June	28,574	32,627	31,501
July	25,968	26,994	26,963
Aug.	25,671	26,954	25,077
Sept.	30,631	34,291	30,274
Oct.	30,123	34,121	32,057
Nov.	30,142	34,820	32,036
Dec.	28,840	29,689	.....
Total ...	335,887	370,794	.....

American Antimony

Monthly Average Prices
In bulk, f.o.b. Laredo
(Cents per lb. in ton lots)

	1954	1955	1956
Jan.	28.50	28.50	33.00
Feb.	28.50	28.50	33.00
Mar.	28.50	28.50	33.00
Apr.	28.50	28.50	33.00
May	28.50	28.50	33.00
June	28.50	28.50	33.00
July	28.50	28.50	33.00
Aug.	28.50	30.66	33.00
Sept.	28.50	33.00	33.00
Oct.	28.50	33.00	33.00
Nov.	28.50	33.00	33.00
Dec.	28.50	33.00	33.00
Aver.	28.50	30.18	33.00

Lead Imports and Exports By Principal Countries

(A. B. M. S.)

Reported in pigs, bars, etc.; metric tons except where otherwise noted:

IMPORTS			
	Sept.	1956 Oct.	Nov.
U. S.* (s.t.)	28,559	15,035	28,503
Denmark	413	1,609	1,463
France	3,487	7,898	4,312
Germany, W.* ..	5,019	4,652	.....
Italy††	426	.....	.....
Netherlands	4,420	3,923	.....
Norway	544	1,011	.....
Sweden	1,152	1,176	.....
Switzerland	1,262	1,549	1,459
U. K. (l.t.)	19,019	10,372	14,508
India* (l.t.)	990	.....	.....
EXPORTS			
	Sept.	1956 Oct.	Nov.
U. S.* (s.t.)	1,029	26	42
Canada (s.t.)	9,908	9,072	.....
Denmark	137	307	70
France	150	160	49
Germany, W.* ..	3,686	2,892	.....
Netherlands	527	733	.....
Switzerland	20	20	32
Northern Rhodesia* (l.t.) ..	1,085	956	.....
Australia* (l.t.) ..	13,016	.....	.....

* Refined.

† Includes scrap.

‡ Includes lead alloys.

* British Bureau of Non-Ferrous Metal Statistics.

French Lead Imports

(American Bureau of Metal Statistics)

(In Metric Tons)

	Jan.-Nov.	1956 Oct.	Nov.
Ore (gross weight)	100,420	7,472	7,986
Greece	4,831	1,044	1,070
Italy	1,129	.....	342
Algeria	4,478	.....	305
Morocco	82,975	6,426	5,269
Fr. Eq. Africa ..	6,031	.....	1,000
Tunisia	976	2	.....
Pig Lead:			
Non-argenti-ferous	52,708	7,898	4,312
Belgium	3,391	.....	.....
Germany (W.) ..	4,694	435	275
Spain	100	.....	.....
U. Kingdom	661	.....	.....
Algeria	431	22	21
Morocco	20,136	3,579	2,276
Tunisia	23,031	3,859	1,738
Australia	203	.....	.....
Other countries ..	61	3	2
Antimonial lead ..	869	.....	.....

U. K. Lead Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

	Jan.-Nov.	1956 Oct.	Nov.
(Gross Weight)			
Lead and lead alloys ...	148,110	10,372	14,508
Australia	87,484	3,006	9,837
Canada	40,933	5,400	3,251
Belgium	6,884	941	650
Yugoslavia	1,200	150	150
United States.	951	.....	.....
Peru	6,874	875	600
Other countries ..	3,784	.....	20

METALS, FEBRUARY, 1957

Domestic Zinc Statistics

American Zinc Institute

Commencing with January, 1948, all regularly operating U. S. primary and secondary smelters are included in this report. Production from foreign ores also is included.

(Tons of 2,000 lbs.)

	Stock Begin- ning	Pro- duction	Domes- tic	Shipments			Total	Stock at End	Unfilled Orders at End	Daily Avg. Prod.
				Export & Drawback	Gov't Acc't					
1950	TL 94,221	910,354	849,246	18,189	128,256	995,691		8,884	74,795	2,494
1950	Mo. Avg.	75,863	70,770	1,516	10,688	82,974				
1951	TL 8,884	931,833	836,800	32,067	39,949	918,816		21,901	50,509	2,553
1951	Mo. Avg.	77,653	69,733	3,506	3,329	76,568				
1952	TL 21,901	961,430	803,343	56,202	36,626	896,171		87,160	45,264	2,627
1952	Mo. Avg.	80,119	66,945	4,683	3,032	74,681				
1953	TL 180,843	971,191	818,850	16,326	42,332	877,508		180,843	35,466	2,661
1953	Mo. Avg.	80,933	68,238	1,361	3,528	73,126				
1954										
Nov.	152,137	80,119	77,074	2,477	18,066	97,617	134,639	44,042	2,671	
Dec.	134,639	85,166	75,105	3,405	17,218	95,728	124,077	45,862	2,747	
Total	124,277	868,242	787,922	27,929	108,957	924,808	124,077	45,862	.....	.....
Monthly Avg.		72,853	65,660	2,327	9,080	77,067	.....	.....	.....	2,379
1955										
Jan.	124,277	86,076	70,863	2,644	19,694	93,201	117,152	57,421	2,777	
Feb.	117,152	78,977	60,016	3,743	15,205	89,964	96,165	54,527	2,820	
Mar.	96,165	89,179	79,720	1,828	12,959	94,507	90,837	60,057	2,877	
Apr.	90,837	83,786	69,589	1,967	8,488	100,044	74,597	65,127	2,793	
May	74,597	86,177	83,336	3,802	10,434	97,572	63,184	70,087	2,780	
June	63,184	84,458	92,212	1,492	5,335	99,039	48,603	57,231	2,815	
July	48,603	84,400	76,812	862	4,039	81,713	51,290	64,056	2,738	
Aug.	51,290	84,874	87,042	885	2,153	90,080	46,084	73,632	2,738	
Sept.	46,084	83,448	83,664	1,274	2,427	87,365	42,167	52,278	2,781	
Oct.	42,167	89,449	85,770	36	1,942	87,748	43,868	61,746	2,886	
Nov.	43,868	86,616	91,585	280	1,561	93,426	38,088	64,560	2,921	
Dec.	38,088	92,578	87,010	684	1,953	89,657	40,979	72,908	2,986	
Total	40,979	1,031,018	1,007,619	19,496	87,200	1,114,316	40,979	72,908	.....	.....
Monthly Avg.		85,918	83,968	1,625	7,267	92,860	.....	.....	.....	2,825
1956										
Jan.	40,979	90,313	87,723	1,084	1,155	89,962	41,330	60,717	2,918	
Feb.	41,330	86,329	84,727	317	2,782	87,826	39,833	45,255	2,977	
Mar.	39,833	91,690	84,204	460	6,821	91,485	40,038	53,070	2,958	
Apr.	40,038	88,664	74,789	1,437	4,570	90,795	47,907	46,106	2,955	
May	47,907	81,258	89,055	287	10,196	89,565	59,577	84,008	2,920	
June	59,577	78,321	83,048	539	15,085	68,672	69,226	46,921	2,611	
July	69,226	83,080	84,219	911	14,501	49,331	102,775	53,559	2,680	
Aug.	102,775	89,549	70,707	1,235	16,075	88,017	104,307	55,769	2,881	
Sept.	104,307	90,235	73,142	934	18,301	92,377	102,165	64,450	3,008	
Oct.	102,165	93,493	84,991	465	21,392	106,848	88,810	53,425	3,016	
Nov.	88,810	91,808	82,478	787	27,168	110,433	70,185	45,866	3,060	
Dec.	70,185	98,234	80,772	671	18,354	99,797	68,622	34,913	3,169	
Total		1,062,954	869,270	9,027	157,014	1,035,311				2,904
Monthly Avg.		88,580	72,439	752	13,085	86,275				
1957										
Jan.	68,622	93,452	67,273	450	15,377	83,100	78,974	42,922	3,014	

U. S. Consumption of Slab Zinc

Bureau of Mines
By Industries (Short Tons)

	Galvan- izers	Die Casters	Brass products	Rolled zinc	Zinc oxide & other	Total
1949 Total	348,544	197,387	84,257	55,100	17,643	702,931
1950 Total	434,094	281,385	136,451	67,779	27,656	947,365
1951 Total	386,373	266,442	141,456	64,000	28,738	887,009
1952 Total	375,563	236,022	155,311	51,508	30,885	849,289
1953 Total	403,162	305,346	177,301	53,784	38,037	977,636
1954						
September	37,591	20,980	8,505	3,153	3,037	73,616
October	36,407	26,051	9,501	4,181	3,055	79,545
November	34,212	30,572	10,573	3,969	2,985	82,461
December	32,263	31,781	10,961	3,350	2,987	81,342
Total	398,599	286,817	107,293	45,979	33,342	876,130
1955						
January	32,638	32,863	12,313	3,754	3,151	84,719
February	31,601	31,254	10,690	3,912	2,745	80,202
March	37,648	37,682	12,718	4,635	3,305	95,988
April	36,136	36,628	11,034	3,833	3,181	90,812
May	37,471	36,926	12,404	4,203	3,409	94,413
June	37,874	32,821	13,305	5,012	3,227	92,239
July	33,433	23,910	7,017	2,832	2,897	70,589
August	38,317	30,168	10,244	5,431	3,027	87,687
September	39,181	31,804	12,672	4,185	3,507	91,849
October	40,030	35,136	13,961	4,714	3,596	97,940
November	38,116	38,616	13,455	3,952	3,636	98,275
December	37,249	36,982	15,003	3,900	3,621	96,755
Total	439,694	404,790	144,816	50,363	39,302	1,081,468
1956						
January	38,148	36,554	13,097	4,442	3,665	95,906
February	37,702	31,274	12,678	3,883	3,325	88,862
March	38,662	31,332	12,889	4,433	3,566	90,882
April	37,092	29,226	12,635	4,010	3,359	86,322
May	38,064	26,003	12,218	3,431	1,260	80,976
June	37,005	21,790	8,351	3,454	1,315	71,915
July	12,960	21,425	5,193	2,187	2,883	45,648
August	33,840	26,814	8,420	4,222	2,959	76,255
September	37,313	26,998	8,370	3,397	3,280	79,358
October	40,875	34,985	10,164	4,158	3,695	93,877
November	37,767	32,812	9,581	3,625	3,539	86,324

Prime Western Zinc Prices

(Cents per pound)
(In tons of 2,240 pounds)

	1954	1955	1956	1957
Jan.	9.76	11.50	13.46	13.50
Feb.	9.375	11.50	13.50	.....
Mar.	9.66	11.50	13.50	.....
Apr.	10.25	11.93	13.50	.....
May	10.29	12.00	13.50	.....
June	10.96	12.25	13.50	.....
July	11.00	12.50	13.50	.....
Aug.	11.00	12.50	13.50	.....
Sept.	11.44	12.96	13.50	.....
Oct.	11.50	13.02	13.50	.....
Nov.	11.50	13.00	13.50	.....
Dec.	11.50	13.00	13.50	.....
Av.	10.69	12.305	13.497	.....

High Grade Zinc Prices

(Delivered)

N. Y. Monthly Averages

(Cents per pound)

	1954	1955	1956	1957
Jan.	11.11	12.85	14.81	14.85
Feb.	10.725	12.85	14.85	.....
Mar.	11.01	12.85	14.85	.....
Apr.	11.60	13.28	14.85	.....
May	11.64	13.35	14.85	.....
June	12.31	13.60	14.85	.....
July	12.35	13.85	14.85	.....
Aug.	12.35	13.85	14.85	.....
Sept.	12.79	14.31	14.85	.....
Oct.	12.85	14.37	14.85	.....
Nov.	12.85	14.35	14.85	.....
Dec.	12.85	14.35	14.85	.....
Av.	12.04	13.655	14.847	.....

U. K. Zinc Consumption

British Bureau of Non-Ferrous Metal
Statistics

(In Tons of 2,240 Pounds)

	1954	1955	1956
Jan.	25,615	29,192	29,779
Feb.	25,286	28,814	29,568
Mar.	29,001	33,451	28,650
Apr.	26,084	27,741	25,348
May	27,551	29,237	27,922
June	29,665	31,467	26,650
July	23,012	23,695	23,826
Aug.	22,102	28,261	18,867
Sept.	30,413	30,080	25,470
Oct.	28,543	29,460	27,784
Nov.	27,901	31,516	27,713
Dec.	29,344	28,683	.....
Total ..	324,517	346,597	.....

Mine Production of Zinc in United States

(U. S. Bureau of Mines)

	(In short tons)			
	Eastern States	Central States	Western States	Total U.S.*
1952				
Total	185,939	94,410	385,652	666,001
1953				
Total	183,612	57,300	293,818	534,730
1954				
Total	166,487	63,100	234,942	464,539
1955				
Mar.	14,679	6,173	24,840	45,692
Apr.	13,767	6,074	23,436	43,277
May	13,563	5,842	25,200	44,605
June	13,840	5,652	24,044	43,536
July	13,400	5,340	22,643	41,383
Aug.	14,426	5,868	22,339	42,633
Sept.	13,830	5,834	22,490	42,154
Oct.	13,332	5,339	22,496	41,167
Nov.	12,676	5,532	21,347	39,555
Dec.	12,644	5,250	21,721	39,615
Total	162,289	67,640	273,871	503,800
1956				
Jan.	13,830	5,017	21,701	40,548
Feb.	13,975	5,236	23,460	42,671
Mar.	15,058	5,740	27,310	48,108
Apr.	14,172	5,098	25,687	44,957
May	14,834	5,471	27,133	47,438
June	13,730	5,228	26,108	45,066
July	13,028	5,371	25,108	43,507
Aug.	14,559	5,425	25,775	45,759
Sept.	13,567	4,628	24,448	42,643
Oct.	17,439	4,785	26,370	48,594

*Includes Alaskan output in some months.

Mine Production of Lead in United States

(U. S. Bureau of Mines)

	(In short tons)			
	Eastern States	Central States	Western States	Total U.S.*
1952				
Ttl.	11,252	150,302	228,607	390,161
1953				
Ttl.	9,970	136,650	188,776	335,412
1954				
Ttl.	8,608	138,940	169,804	317,352
1955				
June	900	11,918	15,609	28,427
July	828	10,925	14,030	25,783
Aug.	821	12,109	13,883	26,813
Sept.	906	11,676	14,294	26,876
Oct.	924	11,635	15,005	27,564
Nov.	762	11,731	13,482	25,975
Dec.	771	13,628	13,403	27,802
Ttl.	10,379	145,640	177,409	333,409
1956				
Jan.	895	11,633	14,294	26,822
Feb.	1,141	12,100	15,009	28,250
Mar.	1,202	13,232	16,516	30,950
Apr.	1,028	11,948	16,729	29,705
May	1,091	12,497	16,387	29,975
June	897	11,492	17,092	29,481
July	749	11,459	15,761	27,969
Aug.	879	12,760	16,991	30,630
Sept.	868	10,632	15,915	27,415
Oct.	879	12,698	17,843	31,520
Nov.	862	10,779	16,862	28,503
Dec.	804	10,670	15,635	27,109
Ttl.	11,395	141,900	195,034	348,329

*Includes Alaskan output in some months.

Mine Production of Gold in United States

(U. S. Bureau of Mines)

	(In fine ounces)		
	Eastern States	Western States	Total
1952			
Ttl.	1,948	1,650,660	233,428 1,886,036
1953			
Ttl.	1,529	1,689,668	273,479 1,964,676
1954			
Ttl.	1,731	1,577,216	252,794 1,831,741
1955			
July	140	92,322	39,661 132,123
Aug.	171	119,327	40,931 160,429
Sept.	170	139,811	52,153 192,134
Oct.	182	140,812	43,486 184,480
Nov.	168	144,837	35,530 180,535
Dec.	166	143,827	5,000 148,993
Ttl.	2,026	1,634,625	247,535 1,884,186
1956			
Jan.	121	132,919	1,977 135,017
Feb.	154	130,264	866 131,284
Mar.	198	134,331	62 134,591
Apr.	156	136,360	522 137,038
May	175	141,319	4,130 145,624
June	199	139,544	12,312 152,055
July	45	126,204	31,515 157,764
Aug.	178	136,827	45,452 182,457
Sept.	194	137,556	40,574 178,324
Oct.	194	129,424	35,901 165,519

*Alaska totals based on mint and smelter receipts.

U. S. Silver Production*

(A.B.M.S.)

	(In thousands of ounces; commercial bars, 0.999 fine, and other refined forms)		
	Dom.†	For.	Total
1952 Total	40,245	36,653	76,898
1953 Total	34,697	37,764	72,461
1954 Total	38,059	39,422	77,481
1955			
July	596	930	1,526
August	2,005	1,669	3,674
September	2,840	2,855	5,695
October	2,432	3,889	6,321
November	3,087	2,775	5,862
December	3,180	3,652	6,832
Total	33,101	32,780	65,881
1956			
January	3,249	4,159	7,408
February	3,615	4,033	7,648
March	3,790	3,550	7,340
April	2,898	3,191	6,089
May	2,905	3,709	6,614
June	2,501	2,248	4,749
July	3,828	2,838	6,666
August	3,035	3,818	6,853
September	2,828	3,002	5,830
October	3,454	3,125	6,579
November	2,886	2,685	5,571
December	3,168	3,802	6,970
Total	38,157	40,160	78,317

*The separation between silver of foreign and domestic origin on the basis of refined bars and other refined forms is only approximate.

† Includes purchases of crude silver by the U. S. Mint.

Mine Production of Recoverable Silver in United States

(U. S. Bureau of Mines)

	(In Fine Ounces)			
	Eastern States	Missouri	Western States	Alaska*
1953 Total	158,707	223,500	36,354,685	39,111
1954 Total	142,180	283,600	36,121,368	35,140
1955				
August	12,360	38,100	2,723,552	5,477
September	11,517	37,180	2,927,151	6,954
October	15,152	35,540	3,145,297	6,704
November	12,476	36,040	2,963,360	4,735
December	11,831	37,556	2,849,045	750
Total	159,038	438,000	36,103,723	33,804
1956				
January	4,664	30,880	2,869,878	316
February	12,252	32,430	2,967,837	82
March	16,536	34,370	3,243,598	11
April	6,918	32,050	3,212,308	61
May	13,870	35,300	3,081,054	545
June	11,758	30,610	3,103,654	1,524
July	17,069	31,160	2,702,563	4,116
August	11,073	35,180	3,243,126	6,322
September	12,111	28,700	2,879,687	5,664
October	7,696	34,540	3,122,958	4,942

*Alaska totals based on mint and smelter receipts.

**Includes a total of 3,708 oz. from Illinois.

Production of Primary Aluminum in the U. S.*

(U. S. Bureau of Mines)

	(In short tons)						
	1949	1950	1951	1952	1953	1954	1955
Jan.	54,536	50,023	67,954	76,934	89,895	116,247	128,203
Feb.	49,749	54,493	62,740	72,374	92,649	110,483	116,236
Mar.	54,852	58,747	70,022	77,069	104,460	122,339	130,272
Apr.	54,076	58,024	67,701	76,880	102,071	120,434	126,394
May	56,909	51,929	67,720	80,803	105,464	125,138	131,128
June	54,184	60,400	67,454	77,476	104,152	120,758	127,634
July	55,777	63,518	72,698	78,368	109,285	126,161	132,669
Aug.	52,001	63,006	73,816	85,175	110,545	125,296	133,551
Sept.	49,742	54,449	69,429	76,882	109,333	120,332	130,606
Oct.	45,790	62,915	72,647	77,312	108,219	125,089	134,655
Nov.	35,865	62,276	72,246	74,639	105,636	121,252	133,689
Dec.	34,161	65,897	72,454	83,419	110,291	127,056	140,748
Total	603,462	718,622	836,881	937,330	1,252,013	1,460,565	1,565,721

*Based on producers' reports to War Production Board to July, 1946. Thereafter to Bureau of Mines. The monthly figures are preliminary in nature and will not add to the totals derived from the Bureau's annual industry canvass.

Average Silver Prices

	(Cents per fine ounce)			
	1954	1955	1956	1957
Jan.	85.25	85.25	90.357	91.375
Feb.	85.25	85.25	90.90	
Mar.	85.25	85.25	91.138	
Apr.	85.25	87.08	90.875	
May	85.25	88.928	90.75	
June	85.25	89.71	90.46	
July	85.25	90.49	90.14	
Aug.	85.25	90.75	90.614	
Sept.	85.25	90.795	90.75	
Oct.	85.25	91.794	90.722	
Nov.	85.25	91.46	91.375	
Dec.	85.25	90.45	91.375	
Ave.	85.25	89.116	90.79	

Note — The averages are based on the price of refined bullion imported on or after August 31, 1943.

U. S. Copper Imports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1956		
	Jan.-Nov.	Oct.	Nov.
Ore, matte & reg. (cont.)	112,193	11,527	7,526
Canada	22,881	2,248	917
Mexico	10,347	786	660
Cuba	14,492	2,610	1,247
Bolivia	4,174	91	1,114
Chile	18,099	1,786	1,631
Peru	10,582	883	618
Cyprus	4,655		
Philippines	10,911	2,173	
U. of S. Africa	14,101	627	1,229
Australia	1,527	279	81
Other countries	424	44	29
Blister copper (content)	241,302	36,210	18,803
Canada	1,038		
Mexico	34,551	2,308	3,692
Chile	145,937	20,932	11,741
Peru	14,234	2,217	2,573
Angola	1,085		
Belgian Congo	4,346		
N. Rhodesia	13,462	924	
U. of S. Africa	4,074		797
Turkey	5,585	2,314	
Australia	16,930	7,515	
Refined cathodes & shapes	175,660	15,016	14,344
Canada	84,961	10,817	8,378
Mexico	4,032	441	606
Chile	37,088	1,634	1,699
Peru	16,000	372	305
Belgium	769		
Germany W.	2,738		
Norway	5,645	647	
Sweden	224		
U. Kingdom	3,349	56	
Yugoslavia	138		
Belg. Congo	7,468	1,049	949
N. Rhodesia	12,448		2,407
Japan	800		

Total Imports:

Crude & ref. 529,155 62,753 40,673

In rolls, sheets

or rods 8,274 592 746

Old and scrap

(content) 5,416 651* 661

Composition

metal (cont.) 57 8 11

Brass scrap & old (cu. cont.)

4,170 260 317

* Revised.

U. S. Zinc Exports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1956		
	Jan.-Nov.	Oct.	Nov.
Ore, conc. (cont.)	582	57	524
Slabs, blocks, etc.	8,402	952	1,091
Canada	3		
Mexico	781	113	116
Cuba	87	28	
Brazil	48		16
Chile	96		
Belgium	1,708	420	280
Germany W.	167	55	
Netherlands	14		
U. Kingdom	5,040	336	672
Korea	411		
India	2		
Other countries	45		7

Total Exports:

Ore, conc., slabs, blocks 8,984 1,009 1,615

Scrap: Ashes, dross and skimmings

12,173 716 471

Rolled in sheets, plates and strips

5,064 430 460

U. S. Copper Exports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1956		
	Jan.-Nov.	Oct.	Nov.
Ore, conc., matte and other unref. (cont.)	4,614	951	941
Refined ingots, bars, etc.†	182,372	21,213	17,836
Canada	2,746	181	315
Brazil	6,914	598	645
Austria	295	56	56
Belgium	50	8	8
Denmark	9		
France	55,292	4,302	2,624
Germany W.	26,709	1,936	2,043
Italy	19,858	3,205	1,721
Netherlands	6,494	168	560
Norway	2,031		336
Sweden	1,372	118	370
Switzerland	12,771	1,035	1,816
U. Kingdom	7,696	1,190	1,243
Formosa	969	2	
India	13,570	2,658	1,035
Japan	24,615	5,649	4,933
Other countries	531	107	6
U. of S. A.	450		125

Total Exports:

Crude and refined 186,986 22,164 18,777

Pipes & tubes* 2,276 116 151

Wire, bare 9,654 923 505

Building wire & cable† 3,360 358 236

Weatherproof wire‡ 801 71 50

Insulated copper wire n.e.s.† 12,922 1,092 914

† Includes exports of refined copper resulting from scrap that was reproposed on toll for account of the shipper. ‡ Gross weight; n.e.s. not elsewhere specified.

* Includes plates, sheets, rods, brush copper, castings, rolls, segments (finished forms) n.e.s.

U. S. Copper Scrap Exports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

(Metal Weight)

	1956		
	Jan.-Nov.	Oct.	Nov.
Copper scrap, unalloyed* (new and old)	22,511	3,404	3,272
Canada	4,722	640	299
Belgium	176		
Germany W.	5,560	375	175
Italy	49	11	38
Netherlands	198		
Switzerland	232		
India	110	28	22
Japan	11,280	2,340	2,633
Other countries	69		
France	115	10	105
Copper-base scrap alloyed† (new & old)	44,098	4,663	3,940
Canada	491	2	29
Mexico	3		1
Austria	291		
Belgium	144	60	
Germany W.	15,634	958	968
Italy	3,673	286	54
Netherlands	662	45	
Spain	289	25	137
Switzerland	391	55	
U. Kingdom	400		28
India	1,979	188	36
Japan	19,838	2,910	2,687
Other countries	303	34	

* Ash, brass mill, clippings, dross, flue dust, residues, scale, skimmings, wire scrap.

† Copper-base alloys, including brass and bronze—Ashes, clippings for remanufacture, cupro-nickel scrap, cupro-nickel trimmings, nickel silver scrap, phosphor bronze, phosphor copper, skimmings, turnings, round.

U. S. Lead Imports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1956		
	Jan.-Nov.	Oct.	Nov.
Ore, matte, etc. (content)	181,048	17,738	12,791
Canada	29,124	2,506	1,166
Mexico	3,301	364	192
Guatemala	6,246	476	557
Honduras	2,553	319	116
Bolivia	14,804	1,490	803
Chile	118		42
Colombia	1,245		620
Peru	49,080	5,088	585
U. of S. Africa	40,891	1,855	4,830
Australia	31,043	5,632	3,529
Philippines	2,040	8	345
Korea	420		
Other countries	183		6
Base bullion (content)	31	31	
Canada	31	31	
Pigs and bars	221,375	15,035	28,503
Canada	14,481	1,880	1,703
Mexico	67,882	4,830	13,598
Peru	28,040	1,930	2,960
Belgium	1,206	110	
Denmark	1,388	167	
France	661		
Germany	168		
Spain	6,670	909	716
U. Kingdom	115		
Yugoslavia	38,655	1,121	5,633
Algeria	353	353	
Fr. Morocco	5,075		
Australia	56,570	3,735	3,893
Other countries	111		

Total Imports:

Ore, base bullion refined 402,454 32,804 41,294

Lead scrap, dross, etc. (cont.) 20,415 310 783

Antimonial lead & typemetal 8,839 313 448

Lead content thereof 7,838 241 388

U. S. Zinc Imports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1956		
	Jan.-Nov.	Oct.	Nov.
Zinc ore (cont.)	480,370	47,182	39,803
Canada	159,117	14,063	14,367
Mexico	176,747	18,973	14,680
Cuba	1,010	63	122
Guatemala	11,430	1,258	1,239
Honduras	2,130	190	114
Bolivia	6,677	1,098	35
Colombia	175		107
Chile	82		5
Peru	91,925	7,402	6,855
U. of S. Africa	10,881	2,976	1,781
Australia	17,764	822	475
Philippines	806	337	21
Other countries	1,626		2
Zinc blocks, pigs, etc.	198,522	31,078	27,580
Canada	100,755	13,273	14,374
Mexico	14,224	610	2,915
Peru	6,290	792	500
Austria	2,184	335	
Belgium	22,926	3,817	1,846
Germany W.	10,116	3,101	1,132
Italy	11,084	2,674	799
Netherlands	3,539	611	1,623
Trieste	110	110	
U. Kingdom	610		
Yugoslavia	500	276	
Belg. Congo	15,085	3,631	2,161
Australia	6,363	1,120	896
Japan	3,056	728	214
Other countries	1,680		1,120

Total Imports:

Zinc ore, blocks, pigs 678,892 78,260 67,383

Dross & skimmings 398 111 46

Old & worn out 122 20 19

Comparative Metal Prices

	Av. 1939	Av. 1946	OPA Jan. 18 1957
Copper Domestic (Electro., Del. Valley)	11.20	14.375	32.00-34.00
Lead (N. Y.)	5.05	8.25	16.00
P. W. Zinc (E. St. Louis, f. o. b.)	5.05	5.05	13.50
New York, del.			14.00
Tin, Spot Straits, N. Y.			101.00
Aluminum Ingot 99%+	20.00	15.00	27.10
Antimony (R.M.M. brand, f. o. t. Laredo)	12.36	14.50	33.00

World Production of Copper

(American Bureau of Metal Statistics)
(In Tons of 2,000 Pounds)

	United States	Canada	Mexico (crude)	Chile	Peru	Fed. Rep. of Germany	Norway	United Kingdom	Yugo-slavia	India	Japan	Turkey	Australia	Northern Rhodesia	Union of South Africa
	(a)	(b)	(c)	(d)	(d)	(e)	(f)	(g-h)	(c)	(f-h)	(e)	(f)	(c)	(c)	(d)
1951															
Total	964,589	269,971	60,511	396,937	25,495	234,647	.....	.....	.....	.....	100,254	.....	16,984	349,667	36,104
1952															
Total	961,886	258,368	60,874	422,493	22,640	206,747	11,206	163,968	36,176	7,009	104,060	2,546	21,119	336,883	37,459
1953															
Total	957,318	253,652	63,380	371,742	25,803	233,330	13,306	108,604	34,381	5,709	100,381	25,641	37,080	382,884	38,341
1954															
Total	863,721	302,984	59,030	372,814	29,233	258,259	14,205	152,858	33,394	8,274	117,371	27,727	42,241	386,577	43,153
1955															
Aug.	67,990	27,844	4,829	36,949	2,613	24,944	1,231	10,946	2,976	763	11,623	1,623	4,760	28,942	4,787
Sept.	96,343	27,502	4,745	30,914	2,544	24,096	1,479	11,396	2,793	682	11,657	.....	.....	33,087	4,411
Oct.	99,514	27,783	5,816	37,427	2,055	23,317	1,439	10,806	2,151	694	11,543	2,552	8,770	36,149	4,368
Nov.	94,287	27,392	5,999	40,699	2,554	24,143	1,308	12,728	2,544	782	11,868	3,010	4,826	28,749	3,844
Dec.	93,186	27,850	5,601	19,282	2,610	22,973	1,010	13,871	2,794	814	11,872	2,801	1,804	31,676	4,068
Total	1,036,702	326,599	61,583	447,288	35,478	286,805	14,876	138,271	31,151	8,432	124,908	26,313	41,935	350,302	47,176
1956															
Jan.	96,732	30,063	6,040	30,475	593	23,826	1,529	14,597	2,436	456	11,133	1,893	3,985	32,887	3,808
Feb.	89,326	26,867	4,965	37,420	2,492	21,106	1,259	11,437	1,872	792	11,029	2,477	4,331	35,545	2,924
Mar.	102,459	31,659	7,107	38,356	2,500	23,839	1,322	12,281	2,313	821	10,890	3,074	5,991	32,535	3,778
Apr.	98,578	27,804	4,436	39,731	2,474	22,593	1,402	8,154	1,660	761	9,927	2,355	5,443	30,789	3,105
May	101,422	29,422	5,801	39,954	2,612	23,134	1,415	10,217	3,103	755	11,923	2,443	4,477	33,577	4,835
June	98,496	29,097	5,614	36,812	2,412	23,920	1,413	9,715	3,018	687	12,490	2,628	4,461	33,640	4,091
July	84,787	31,141	5,109	40,880	2,602	24,383	1,186	12,223	3,197	740	12,570	1,044	4,589	33,279	3,090
Aug.	91,282	28,719	5,357	44,202	2,523	24,006	1,251	6,733	3,323	782	12,443	1,584	4,841	33,720	4,715
Sept.	88,659	31,204	5,609	41,475	.....	24,022	1,510	11,281	3,028	785	12,015	2,298	4,207	23,992	4,307
Oct.	95,109	29,962	6,488	.....	.....	24,405	1,733	11,127	3,020	757	12,477	2,754	4,497	38,345	4,868
Nov.	90,573	.....	5,871	.....	.....	22,156	.....	11,426	.....	702	10,648	.....	.....	34,999	.....
Dec.	90,909	.....	5,521	.....	838	.....	.....	.....	.....	.....	11,993	.....	.....	35,113	.....

(a) Reported by Copper Institute. Crude, "recoverable contents of mine production or smelter production or shipments, and custom intake". Does not include intake of scrap nor of imported ore except that received from Cuba and Philippines. (b) Blister copper plus recoverable copper in concentrates, matte, etc., exported. (c) Crude copper, i. e., copper content of blister or converter copper as originally produced in the several countries, although some of it may be refined at home; e. g., in Rhodesia. (d) Blister and/or refined. (e) Refined. There are quantities of scrap included in the electrolytic production in addition to that reported, tonnage of which is not obtainable. (f) Smelter production. (g) Refinery production from imported blister only. (h) British Bureau of Non-Ferrous Metal Statistics. * Refined.

World Production of Refined Lead

(American Bureau of Metal Statistics)
(In Tons of 2,000 Pounds)

	United States	Canada	Mexico	Peru	Belgium	France	Fed. Rep. of Germany	Italy	Spain	Yugo-slavia	Japan	Australia (a)	French Morocco	Tunisia	Rhodesia	Total
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
1951																
Total	486,874	162,712	219,352	48,824	77,873	53,831	170,766	39,683	45,460	.....	18,516	217,301	20,287	25,476	15,646	1,602,601
1952																
Total	532,778	183,389	248,551	53,536	83,139	59,607	152,751	38,504	46,060	74,053	20,382	217,293	31,224	28,264	14,112	1,783,648
1953																
Total	533,883	166,356	225,075	66,520	84,162	60,887	164,077	40,786	53,799	78,038	25,513	241,419	29,970	30,397	12,591	1,813,778
1954																
Total	551,618	166,379	231,595	63,735	79,260	71,033	162,773	41,150	62,475	78,555	37,612	260,424	29,417	30,015	16,800	1,877,841
1955																
Total	547,153	148,811	221,138	67,303	91,241	73,251	162,397	46,086	67,509	83,347	40,912	254,558	28,870	28,620	17,976	1,893,014
Sept.	60,453	14,828	18,382	6,323	9,032	6,555	13,910	3,805	6,421	6,687	3,851	25,833	3,236	2,706	1,680	171,208
Oct.	63,747	15,326	17,225	5,760	8,777	7,044	15,397	4,828	5,709	6,260	3,679	21,946	.....	1,944	1,568	169,109
Nov.	52,623	12,887	17,576	6,473	8,468	5,891	17,803	3,741	6,133	7,799	3,785	18,820	.....	2,535	1,456	164,890
Dec.	50,448	12,553	18,637	7,038	8,030	6,730	16,806	4,031	5,267	7,208	3,946	21,113	1,414	3,790	1,456	168,467
1956																
Jan.	51,366	12,179	17,587	1,730	8,731	7,014	16,218	3,722	5,399	6,210	3,929	24,196	4,967	2,070	1,456	167,874
Feb.	49,475	11,469	16,510	6,497	9,446	6,241	15,743	3,688	5,202	4,708	4,239	16,392	4,572	1,307	1,232	167,173
Mar.	54,174	12,438	17,376	6,142	9,338	6,383	14,562	3,164	5,319	7,187	4,009	19,535	3,505	2,500	1,680	167,740
Apr.	52,976	11,554	15,186	6,790	8,650	6,276	14,398	3,799	6,118	7,159	4,136	17,407	2,056	2,273	1,456	161,391
May	47,961	11,990	17,611	6,970	9,188	6,814	14,022	4,611	5,660	5,786	4,142	15,984	798	2,372	1,456	156,551
June	47,367	11,591	18,091	6,779	9,481	6,704	14,302	3,100	4,767	5,782	3,972	19,664	.....	2,064	1,456	167,930
July	48,479	12,374	18,515	6,415	9,965	6,377	12,165	3,887	5,195	7,827	4,202	27,935	.....	2,876	1,841	170,426
Aug.	48,404	12,196	18,890	6,192	9,372	1,896	11,586	2,440	4,724	7,546	4,126	19,757	4,151	1,933	1,400	155,665
Sept.	53,530	12,706	18,567	6,378	9,213	6,071	13,671	2,833	5,962	6,182	4,614	23,654	3,630	2,970	1,344	172,788
Oct.	54,815	.....	20,169	2,237	9,243	7,212	16,873	6,002	8,237	4,271	26,243	2,490	2,389	1,400	.....	.....
Nov.	50,744	.....	17,934	.....	.....	7,883	17,679	3,319	5,343	.....	4,484	.....	.....	2,180	1,232	.....
Dec.	54,062	.....	17,088	5,787	.....	.....	.....	.....	.....	4,751	.....	.....	.....	.....	1,344	.....

(a) Production credited to Australia includes lead refined in England from Australian base bullion.

World Production of Slab Zinc

(American Bureau of Metal Statistics)
(In Tons of 2,000 Pounds)

	United States	Can.	Mexico	Peru	Belgium	France	Fed. Rep. of Germany	Great Britain	Italy	Nether-lands	Norway	Spain	Yugo-slavia	Japan	Australia	Rhodesia	Total
	(a)	(b)		(b-c)							(b)			(a)	(b)	(b)	(d)
1951																	
Total	931,833	218,548	57,990	1,003	220,479	82,184	155,024	78,101	52,058	24,924	44,971	23,444	.....	62,109	88,103	25,391	2,065,216
1952																	
Total	961,430	223,140	61,466	5,491	205,909	88,255	162,272	76,981	60,438	28,555	43,061	23,329	15,943	77,203	97,931	25,687	2,141,089
1953																	
Total	971,191	247,707	69,589	9,819	213,215	89,218	163,430	81,436	65,780	27,721	42,566	24,152	16,037	86,833	101,003	28,370	2,228,017
1954																	
Total	868,242	218,810	60,477	16,982	234,896	122,248	184,806	90,987	14,356	28,686	48,768	25,109	15,040	112,292	117,066	29,736	2,243,501
1955																	
Total	89,449	22,206	5,212	1,545	19,345	10,262	16,735	6,940	6,906	2,735	4,704	2,243	1,176	11,644	9,972	2,604	213,678
Oct.	87,616	21,398	5,066	818	19,244	9,848	15,708	7,442	6,183	2,846	4,501	2,185	1,142	11,600	9,860	2,576	210,265
Nov.	92,578	21,135	5,262	.....	20,079	10,332	17,061	9,316	6,420	2,886	4,492	2,258	1,147	11,654	9,972	2,632	220,043
Dec.	1,031,018	257,008	61,879	18,943	233,623	123,623	197,024	90,917	77,761	31,202	49,724	26,244	15,175	122,965	113,221	31,248	2,533,879
1956																	
Jan.	90,313	21,696	5,279	.....	20,359	11,756	16,827	6,768	6,315	2,786	4,845	2,219	1,146	15,928	9,753	2,632	222,290
Feb.	86,329	20,356	4,949	963	20,589	9,911	15,599	7,684	5,799	2,777	3,961	2,038	1,144	10,357	8,982	2,688	208,693
Mar.	91,690	22,010	5,333	1,980	20,710	9,491	16,839	9,351	6,355	2,853	4,331	2,166	1,236	11,702	9,572	2,688	224,927
Apr.	88,664	21,339	5,207	1,220	20,687	10,819	16,689	7,382	6,613	2,693	4,002	2,172	1,222	13,806	9,243	2,688	218,394
May	81,238	21,790	5,248	1,225	21,380	11,174	17,212	6,719	7,190	2,662	4,168	2,226	1,289	13,401	10,012	2,688	214,193
June	78,321	20,780	5,142	1,439	21,030	11,003	16,808	8,557	6,270	2,530	4,427	2,175	1,282	12,466	8,606	2,632	208,635
July	83,080	21,691	5,198	1,285	21,615	10,679	17,964	6,617	6,433	2,637	4,688	2,047	1,325	13,089	11,141	2,806	216,200
Aug.	89,549	21,354	5,154	1,427	20,996	10,846	17,633	6,925	6,995	2,542	4,826	1,915	1,420	12,385	10,622	2,464	221,801
Sept.	90,235	20,691	5,018	.....	21,207	10,210	17,187	9,130	6,817	2,452	4,487	1,918	1,287	12,674	9,866	2,744	220,868
Oct.	93,493	21,412	5,257	.....	21,153	8,871	17,428	6,773	7,334	2,718	4,743	2,110	1,244	13,497	10,171	2,800	.....
Nov.	91,808	20,470	5,060	.....	.....	9,257	16,851	6,443	7,037	2,727	4,538	2,087	1,414	12,718	9,810	2,716	.....
Dec.	98,234	22,012	5,291	889	.....	.....	.....	8,135	.....	.....	4,534	.....	.....	12,563	.....	2,856	.....

U. K. Virgin Copper Stocks

(In long tons)
British Bureau of Non-Ferrous Metal Statistics

At start of:	1954	1955	1956
Jan.	55,344	61,480	76,197
Feb.	60,402	62,771	79,377
Mar.	60,084	70,185	71,634
Apr.	47,258	67,566	73,776
May	60,118	60,767	76,481
June	65,314	58,546	71,713
July	68,037	64,256	76,188
Aug.	67,307	99,628	68,197
Sept.	77,323	107,261	72,069
Oct.	72,266	93,681	62,327
Nov.	61,484	75,533	58,893
Dec.	61,673	77,749	55,838

U. K. Refined Lead Stocks

British Bureau of Non-Ferrous Metal Statistics

(In long tons)			
At start of:	1954	1955	1956
Jan.	26,887	31,173	40,987
Feb.	32,653	32,274	34,326
Mar.	30,697	39,461	29,693
Apr.	28,312	37,587	33,974
May	30,005	45,226	29,479
June	29,793	38,760	30,537
July	30,437	30,816	37,088
Aug.	29,492	32,270	35,432
Sept.	26,298	48,036	35,792
Oct.	28,958	42,912	39,391
Nov.	22,269	42,061	32,662
Dec.	26,937	38,410	32,025

U. K. Stocks of Zinc

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)			
Virgin Zinc	Zinc Conc.		
At start of:	1955	1956	1955
Jan.	49,962	49,962	47,200
Feb.	48,027	45,239	43,779
Mar.	45,679	44,288	44,176
Apr.	49,301	49,194	51,603
May	53,573	49,129	47,741
June	50,447	47,226	47,791
July	48,227	47,664	47,399
Aug.	54,562	49,169	50,649
Sept.	60,935	51,946	55,350
Oct.	60,800	50,978	55,234
Nov.	54,679	47,364	60,065
Dec.	50,678	46,364	58,414

U. K. Copper Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)			
Jan.-Nov.	1956	Oct.	Nov.
(Gross Weight)			
Copper and			
copper alloys	363,328	40,501	32,804
U. of S. Africa	1,641	50	346
N. Rhodesia	212,197	22,304	18,564
Canada	54,018	5,087	5,517
Belgium	4,415	500	650
Germany (W.)	1,798	214	6
Norway	491		
United States	7,662	1,352	1,742
Chile	67,329	10,302	5,291
Peru	2,592	150	226
Belg. Congo	7,450	500	450
Other countries	3,735	12	12
Of which:			
Electrolytic	232,643	28,106	21,289
Other refined	30,887	3,203	2,196
Blister or			
rough	97,112	9,030	9,300
Wrought and			
alloys	2,686	162	19
Total	363,328	40,501	32,804

METALS, FEBRUARY, 1957

Copper Consumption in United Kingdom

British Bureau of Non-Ferrous Metal Statistics

(In tons of 2,240 pounds)					
Unalloyed	Alloyed*	Total	Virgin	Scrap	
1953 Total	243,717	192,337	447,260	322,311	124,949
1954 Total	328,149	251,989	580,138	448,413	131,725
1955					
August	24,731	18,390	43,121	33,255	9,866
September	36,286	24,007	60,293	47,180	13,113
October	36,309	25,276	61,585	47,519	14,066
November	35,791	25,854	61,645	48,690	12,955
December	32,953	23,108	56,061	41,130	14,931
Total	377,576	281,953	659,529	496,467	163,062
1956					
January	34,567	24,461	59,028	45,676	13,352
February	33,213	24,163	57,376	40,934	16,442
March	32,903	24,366	57,269	43,913	13,356
April	27,489	21,029	48,518	36,418	12,100
May	29,845	22,295	52,140	41,747	10,393
June	33,774	21,810	55,584	43,622	11,962
July	31,752	19,316	51,068	39,149	11,919
August	24,426	14,434	38,860	30,065	8,795
September	35,203	19,584	54,787	45,807	8,980
October	36,824	21,275	58,099	47,814	10,285
November	38,244	21,142	59,386	47,144	12,242

*Includes copper sulphate effective October, 1954.

U. K. Zinc Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)			
Jan.-Nov.	1956	Oct.	Nov.
(Gross Weight)			
Zinc ore and			
concentrates	159,090	16,663	4,533
Zinc conc.	†	6,114	†
Australia	4,470		
Italy	436		
N. Rhodesia	856		
Turkey	352		
Zinc and			
zinc alloys	119,105	10,267	12,865
N. Rhodesia	4,171	350	
Australia	7,569	688	1,782
Canada	53,527	6,419	6,436
Belgium	16,538	989	1,699
Germany (W.)	2,991	1	
Netherlands	2,649	215	195
Norway	550		
United States	7,120	300	300
Other countries	23,990	1,305	2,453
Of which:			
Zinc or spelter,			
unwrought in			
ingots, blocks,			
bars, slabs and			
cakes	118,593	10,238	12,813
Other	512	29	52
Total	119,105	10,267	12,865

† Not available.

Zinc Imports and Exports By Principal Countries

(A. B. M. S.)

Reported in pigs, bars, etc.; metric tons except where otherwise noted:

IMPORTS	1956		
Sept.	Oct.	Nov.	
U. S. (s.t.)	26,094	31,078	27,580
Canada (s.t.)	3		
Denmark	238	720	229
France	690	675	245
Germany, W.†	4,382	3,666	
Italy	177		
Netherlands	649	467	
Sweden	3,158	2,533	
Switzerland†	842	1,736	1,159
U. K. (l.t.)	8,892	10,267	12,865
India* (l.t.)	3,293		
EXPORTS			
U. S. (s.t.)	657	952	1,091
Canada (s.t.)	19,732	20,791	
Denmark		16	
France		24	
Germany, W.†	4,904	4,709	
Italy	2,331		
Netherlands	1,755	1,340	
Norway	2,070	3,796	
Switzerland†	460	445	322
U. K.† (l.t.)	203	345	519
Northern			
Rhodesia* (l.t.)	2,794	2,461	2,689
Australia* (l.t.)	1,013		
Belg. Congo	3,251		

† Includes scrap. † Includes manufactures.
* British Bureau of Non-Ferrous Metal Statistics.

United Kingdom Tin Statistics

(British Bureau of Non-Ferrous Metal Statistics)

Tin Content of Tin in Ore							
Imports	Production*	Stock at end of period*	Imports	Production*	Consumption	Exports & Re-exports	Stock at end of period
1954 Total	27,494	2,473	2,404	27,475	21,859	8,585	4,847
1955							
September	1,739	97	1,800	1,920	1,920	981	3,053
October	2,245	90	2,349	2,197	1,866	1,097	2,363
November	3,034	86	2,878	2,421	2,081	577	2,935
December	1,679	71	2,181	1,555	2,233	628	2,999
1955 Total	27,084	1,034	2,181	1,227	27,241	8,924	2,999
1956							
January	1,548	110	1,194	1,414	1,881	704	8,236
February	2,695	88	2,384	1,769	2,082	793	2,871
March	2,526	94	2,705	2,452	1,825	237	3,304
April	2,045	76	2,341	1,924	1,692	475	3,638
May	1,650	81	1,861	39	2,455	1,013	3,438
June	1,647	74	1,240	69	2,660	1,803	4,424
July	3,100	111	2,240	173	2,082	1,854	3,460
August	2,691	48		20	1,931	1,577	3,784
September	934			247	2,575	1,903	3,274

*As reported by International Tin Study Group. Production of Tin Metal includes production from imported scrap and residues refined on toll. Stocks exclude strategic stock but include official warehouse stocks.

Canada's Copper Output

(Dominion Bureau of Statistics)

(Refined Copper) (In Tons)				
	1953	1954	1955	1956
Jan.	21,830	15,001	22,600	26,653
Feb.	21,075	13,954	21,455	26,229
Mar.	22,432	21,075	25,083	26,750
Apr.	21,747	20,412	24,077	26,617
May	20,179	23,012	23,840	27,626
June	18,384	23,344	21,890	27,122
July	19,996	21,582	21,185	27,250
Aug.	19,886	22,000	26,184	29,219
Sept.	16,777	22,684	24,752	27,950
Oct.	17,675	21,661	25,546	29,696
Nov.	17,101	22,981	25,213	27,346
Dec.	18,703	24,935	27,172	.....
Year	235,787	252,643	288,987	.....

Canada's Lead Exports

(Dominion Bureau of Statistics)

(In Pigs) (In Tons)				
	1953	1954	1955	1956
Jan.	11,212	6,170	5,500	4,888
Feb.	8,710	7,560	11,882	3,856
Mar.	14,943	11,092	10,318	4,007
Apr.	14,765	9,606	11,967	7,636
May	7,039	11,483	6,416	7,214
June	13,434	12,018	9,897	6,632
July	1,357	13,152	8,341	9,696
Aug.	8,869	8,646	4,884	4,713
Sept.	3,903	10,045	5,538	9,908
Oct.	7,532	8,005	8,053	9,072
Nov.	6,581	10,817	4,622	9,227
Dec.	4,354	7,815	5,286	.....
Year	102,879	116,409	92,704	.....

Canada's Silver Exports

(Dominion Bureau of Statistics)

(In ores and concentrates) (Fine Ounces)			
	1954	1955	1956
Jan.	547,951	429,704	435,047
Feb.	567,225	457,261	196,803
Mar.	849,502	411,597	328,857
Apr.	572,059	493,578	348,838
May	660,724	445,054	447,710
June	682,906	592,238	495,742
July	1,210,045	285,350	686,209
Aug.	953,379	644,932	1,080,301
Sept.	605,188	636,992	481,042
Oct.	612,874	684,301	731,099
Nov.	606,274	387,147	669,285
Dec.	804,213	405,719	.....
Year	8,672,340	5,873,873	.....

Canada's Copper Exports

(Dominion Bureau of Statistics)

(Ingots, bars, slabs and billets) (In Tons)				
	1953	1954	1955	1956
Jan.	7,668	9,081	11,078	15,981
Feb.	16,411	8,385	12,897	11,041
Mar.	10,578	11,671	12,423	12,276
Apr.	11,153	11,218	10,321	14,476
May	14,726	18,407	10,911	12,851
June	15,053	14,877	13,387	10,985
July	13,939	15,467	12,674	13,599
Aug.	7,272	14,158	13,219	14,710
Sept.	8,139	14,069	13,479	17,268
Oct.	8,957	11,528	14,208	13,896
Nov.	9,062	13,372	14,545	19,130
Dec.	9,036	13,897	14,057	.....
Year	131,994	156,130	153,199	.....

Canada's Zinc Output

(Dominion Bureau of Statistics)

(Refined Zinc) (In Tons)				
	1953	1954	1955	1956
Jan.	18,370	17,155	22,028	21,696
Feb.	18,677	15,199	19,865	20,356
Mar.	20,693	16,550	22,215	22,010
Apr.	20,003	16,249	21,301	21,339
May	20,090	16,530	21,599	21,790
June	20,589	17,017	20,565	20,780
July	21,595	17,917	21,769	21,691
Aug.	21,703	18,755	22,029	21,354
Sept.	21,157	18,023	20,898	20,691
Oct.	21,888	18,871	22,206	21,412
Nov.	21,051	19,662	21,398	20,470
Dec.	21,899	21,922	21,135	.....
Year	247,707	213,810	257,008	.....

Canada's Silver Output

(Dominion Bureau of Statistics)

(In Ounces)			
	1954	1955	1956
Jan.	2,603,593	2,182,386	2,280,575
Feb.	2,068,740	1,960,506	2,094,467
Mar.	2,352,392	2,413,591	2,296,648
Apr.	2,745,615	2,304,287	1,759,384
May	2,564,919	2,235,620	2,463,374
June	2,769,694	2,461,675	2,494,748
July	2,717,859	2,385,654	2,267,271
Aug.	2,840,385	2,480,607	2,315,312
Sept.	2,804,384	2,386,385	2,517,451
Oct.	2,461,823	2,371,890	2,379,162
Nov.	2,823,719	2,088,991	2,429,547
Dec.	2,364,826	2,388,627	.....
Year	31,117,949	27,696,319	.....

Canada's Lead Output

(Dominion Bureau of Statistics)

(Recoverable Lead)* (In Tons)				
	1953	1954	1955	1956
Jan.	19,502	17,716	18,959	16,002
Feb.	16,888	16,863	15,018	14,344
Mar.	14,183	17,104	19,113	16,857
Apr.	18,640	19,452	17,889	11,573
May	16,120	19,953	16,808	15,446
June	15,302	18,988	17,800	18,145
July	11,969	19,164	16,650	15,841
Aug.	13,864	18,237	16,676	16,104
Sept.	14,335	17,066	15,972	15,760
Oct.	16,327	16,569	13,658	16,725
Nov.	19,433	18,365	15,182	14,865
Dec.	19,273	19,093	17,357	.....
Year	195,836	219,280	201,583	.....

Canada's Zinc Exports

(Dominion Bureau of Statistics)

(Slabs in Tons)				
	1953	1954	1955	1956
Jan.	17,478	16,625	22,181	15,550
Feb.	13,580	11,328	25,556	11,757
Mar.	18,307	18,199	20,178	8,822
Apr.	17,068	17,926	21,018	14,317
May	15,595	13,926	14,820	11,357
June	14,919	15,654	19,581	15,296
July	10,068	27,582	13,522	15,499
Aug.	8,594	14,934	16,581	13,070
Sept.	9,423	17,298	11,793	19,732
Oct.	11,862	13,064	19,836	20,792
Nov.	10,685	16,224	14,164	21,411
Dec.	10,809	23,277	14,607	.....
Year	158,388	206,037	213,837	.....

Canada's Nickel Output

(Dominion Bureau of Statistics)

(In Tons)				
	1953	1954	1955	1956
Jan.	12,517	12,765	14,387	14,985
Feb.	10,662	11,874	13,375	14,997
Mar.	12,268	13,619	15,544	15,504
Apr.	11,841	13,015	15,011	14,431
May	11,610	13,458	15,352	15,203
June	11,687	13,269	14,835	14,492
July	11,801	12,901	14,530	15,125
Aug.	11,911	13,428	14,825	14,852
Sept.	12,031	13,521	13,734	14,530
Oct.	12,469	14,323	14,411	15,048
Nov.	12,764	14,159	14,290	15,062
Dec.	12,122	14,947	14,881	.....
Year	143,693	161,79	175,173	.....

*New base bullion from Canadian ores plus recoverable lead in ores or concentrates shipped for export.

Canadian Copper Exports

(Dominion Bureau of Statistics)

(In tons of 2,000 lbs.)			
	1956		
	Jan.-Nov.	Oct.	Nov.
Ore, matte, regulus, etc. (content)	36,327	3,293	2,439
United States	22,215	2,103	1,638
Belgium	398	96	55
Germany (W.)	692	72	...
Norway	11,969	948	636
U. Kingdom	1,052	74	110
Pakistan	1	...	...
Ingot, bars, billets, anodes	156,212	13,896	19,130
United States	87,354	9,661	8,085
Brazil	36	...	3
France	8,852	390	1,508
U. Kingdom	55,981	3,843	7,772
India	3,973	...	1,762
Other countries	16	2	...
Total Exports:			
Crude & refined	192,539	17,189	21,569
Old & scrap	13,443	1,085	1,734
Rods, strips, sheet & tubing	11,400	1,099	1,189

Canadian Zinc Exports

(Dominion Bureau of Statistics)

(In tons of 2,000 lbs.)			
	1956		
	Jan.-Nov.	Oct.	Nov.
Ore (zinc content)	181,823	14,976	18,137
United States	155,834	12,949	13,517
Belgium	7,376	...	1,337
France	3,948	2,027	...
Norway	8,354	...	3,283
U. Kingdom	6,311	...	...
Slab zinc	167,602	20,791	21,411
United States	101,870	13,701	14,752
Argentina	1,673	33	...
Brazil	16	...	3
U. Kingdom	61,738	7,057	6,637
Korea	378	...	...
Hong Kong	56	...	...
Philippines	661	...	...
Taiwan	71	...	18
India	1,120	...	...
Other countries	19	...	1
Total Exports:			
Ore and slabs	349,425	35,767	39,548
Zinc scrap, dross, ashes	5,080	413	662
United States	574	50	123
Belgium	2,885	312	102
France	158	...	...
Germany (W.)	150	...	53
Netherlands	1,145	51	384
Italy	53	...	...
India	115	...	...

Canada's Nickel Exports

(Dominion Bureau of Statistics)

(Refined, in oxides, matte, etc.)		
(In Tons)		
	1955	1956
January	14,421	15,121
February	13,915	13,940
March	13,564	16,219
April	16,083	14,448
May	14,761	14,729
June	16,296	16,403
July	13,929	11,079
August	14,861	18,470
September	14,638	13,849
October	13,589	12,800
November	13,073	14,084
December	14,749	...
Year	173,879	...

METALS, FEBRUARY, 1957

Copper Imports and Exports By Principal Countries

(A. B. M. S.)

Reported in ingots, slabs, etc.; metric tons except where otherwise noted:

IMPORTS			
	Sept.	1956	
	Oct.	Nov.	
U. S. (bliss, s.t.)	26,873	36,210	18,803
(ore, etc., s.t.)	6,896	11,527	7,526
(ref., s.t.)	13,697	15,016	14,344
Denmark	63	605	292
France (crude)	813	10	813
(refined)	16,682	13,024	9,745
Italy	9,916	...	...
Germany, W.	17,654	17,383	...
Netherlands	925	2,071	...
Norway	33	522	...
Sweden	2,608	5,524	...
Switzerland	2,189	2,695	3,845
U. K. (s.t.)	26,041	40,501	32,804
India* (ref., l.t.)	3,307	...	...
EXPORTS			
U. S. (ore and unref., s.t.)	325	951	941
(ref., s.t.)	22,025	21,213	17,836
Canada (ref., s.t.)	17,268	13,896	...
Finland†	2	232	...
Germany, W.	5,506	3,771	...
Norway	1,242	1,445	...
Sweden	1,102	653	...
U. K. (l.t.)	2,100	4,206	3,667
Turkey†	1,000	...	...
No. Rhodesia (ref. & bliss, l.t.)*	32,437	29,493	33,778

† Includes copper alloys.

‡ Includes old.

* British Bureau of Non-Ferrous Metal Statistics.

U. K. Copper Exports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)			
	1956		
	Jan.-Nov.	Oct.	Nov.
(Gross Weight) Copper unwrought, ingots, blocks, slabs, bars, etc.	28,499	4,206	3,667
Plates, sheets, rods, etc.	16,890	1,399	1,835
Wire (including uninsulated electric wire)	50,491	6,868	6,786
Tubes	9,748	1,112	1,209
Other copper worked (incl. pipe fittings)	1,421	221	193
Total	107,049	13,805	13,690

Canadian Lead Exports

(Dominion Bureau of Statistics)

(In tons of 2,000 lbs.)			
	1956		
	Jan.-Nov.	Oct.	Nov.
Ore (lead content)	45,405	6,583	2,841
United States	25,428	2,286	1,438
Belgium	12,154	2,454	1,403
Germany (W.)	7,823	1,843	...
Refined lead	76,899	9,072	9,278
United States	14,484	1,742	1,582
Cuba	1	...	...
Uruguay	431	331	...
Venezuela	93	...	49
U. Kingdom	50,216	5,191	5,886
Japan	11,408	1,775	1,702
Taiwan	113	32	6
Other countries	153	1	53
Total Exports:			
Ore & refined	122,304	15,655	12,119
Pipe & tubing	18	1	1
Lead scrap	158	...	...

French Copper Imports

(American Bureau of Metal Statistics)

(In Metric Tons)			
	1956		
	Jan.-Nov.	Oct.	Nov.
Ore (gross weight)	2,656	...	...
Morocco	2,656	...	...
Crude copper for refining (blister, black and cement)	4,990	10	813
Belgium	102	...	...
Germany	1	...	...
U. Kingdom	10	10	...
Belg. Congo	4,877	...	813
Refined	148,908	13,024	9,745
United States	50,665	6,200	1,765
Canada	7,278	283	628
Chile	2,400	...	...
Peru	3	...	...
Belgium	40,471	3,627	4,032
Germany (W.)	5,053	249	404
Norway	1,180	42	219
Sweden	879	171	...
U. Kingdom	1,928	310	86
Belg. Congo	26,384	879	1,717
U. of S. Africa	521	...	...
Rhodesia-Nyassaland	12,076	1,263	894
Other countries	70	...	...

French Zinc Imports

(American Bureau of Metal Statistics)

(In Metric Tons)			
	1956		
	Jan.-Nov.	Oct.	Nov.
Ore (gross weight)	277,528	25,901	24,425
Canada	11,603	3,320	...
Peru	15,621	1,355	2,020
Belgium	1,117	...	278
Finland	4,550	520	2,750
Germany (W.)	5,531	262	21
Greece	7,102	829	1,051
Italy	19,750	591	1,028
Netherlands	304	...	...
Norway	669	...	...
Spain	37,662	2,368	1,889
Yugoslavia	11,885	750	...
Algeria	50,644	3,142	3,938
Morocco	75,560	5,237	7,642
Tunisia	10,985	2,166	...
Belg. Congo	8,633	3,260	...
Australia	15,089	2,101	3,808
Burma	520	...	...
Other countries	303	...	...
Slabs, bars, blocks, etc.	9,310	675	245
Mexico	205	50	25
Belgium	7,940	565	60
Germany (W.)	550	...	...
Italy	460	60	60
U. Kingdom	2	...	...
Algeria	103	...	50
China	50	...	50

French Metal Exports

(American Bureau of Metal Statistics)

(In Metric Tons)			
	1956		
	Jan.-Nov.	Oct.	Nov.
Lead			
Ore (gross weight)	263	10	23
Pig lead:			
Non-ferrous	6,714	160	49
Antimonial lead	500	41	18
Zinc			
Slabs, bars, blocks, etc.	100	24	...
Copper			
Crude copper for refining, (blister, black and cement)	394	...	...

Nonferrous Castings

MONTHLY SHIPMENTS, BY TYPE OF METAL
(Bureau of Census — Thousands of Pounds)

	Alu- minum	Copper	Mag- nesium	Zinc	Lead Die
1951 Total	515,131	1,197,443	30,825	487,996	25,936
1952 Total	518,979	1,009,910	34,857	408,353	20,941
1953 Total	658,022	990,496	34,517	521,253	20,444
1954 Total	607,764	834,557	25,572	474,741	18,396
1955					
June	68,473	90,476	2,367	66,569	2,045
July	55,033	65,816	1,920	47,928	1,684
August	64,864	87,206	2,176	62,677	1,904
September	67,170	89,600	2,478	62,030	1,924
October	72,197	91,192	2,302	71,689	1,789
November	75,065	90,345	2,325	75,099	1,896
December	75,275	88,287	2,255	70,950	1,817
Total	833,058	1,011,748	27,892	781,254	21,045
1956					
January	74,152	89,767	2,959	68,050	1,598
February	73,096	91,706	2,977	66,584	1,636
March	73,785	96,085	3,046	65,760	1,644
April	67,880	90,679	3,140	58,274	1,910
May	65,786	89,188	3,091	59,205	1,919
June	58,189	78,921	2,949	47,775	1,883
July	52,955	60,926	2,810	42,227	1,551
August	61,507	77,619	3,059	52,321	2,112
September	62,503	72,109	3,079	46,340	1,004
October	74,209	81,049	3,442	65,450	2,206
November	69,741	72,866	2,892	64,972	1,788

Prompt Tin Prices

(Straits, Open Market, N. Y.)

Monthly Average Prices
(Cents per pound)

	1954	1955	1956	1957
Jan.	84.84	87.628	104.768	101.347
Feb.	85.04	90.75	100.586	....
Mar.	91.24	91.065	100.524	....
Apr.	96.238	91.41	99.145	....
May	93.51	91.38	96.853	....
June	94.24	93.64	94.488	....
July	96.55	96.825	96.131	....
Aug.	93.381	96.456	98.924	....
Sept.	93.536	96.256	103.559	....
Oct.	93.00	96.075	105.716	....
Nov.	91.099	97.882	110.329	....
Dec.	88.571	107.75	104.00	....
Av.	91.77	94.73	101.252	....

Copper Castings Shipments

BY TYPE OF CASTING

(Bureau of Census) (Thousands of Pounds)

	Total	Sand	Permanent	Mold	Die	All Other
1951 Total	1,197,443	1,075,437	69,883	12,516	39,607	
1952 Total	1,009,910	910,862	63,865	8,259	26,924	
1953 Total	990,496	888,369	61,316	10,077	30,734	
1954 Total	834,557	751,804	48,849	6,480	27,394	
1955						
April	84,183	75,903	5,152	654	2,474	
May	85,008	76,064	5,513	764	2,667	
June	90,476	80,869	5,840	739	3,028	
July	65,816	59,138	3,998	691	1,989	
August	87,206	77,721	5,322	844	2,412	
September	89,600	80,481	5,652	692	2,824	
October	91,192	82,958	4,513	727	2,994	
November	90,345	80,934	5,807	743	2,861	
December	88,287	78,327	6,368	713	2,879	
Total	1,011,748	907,852	63,041	8,541	31,408	
1956						
January	89,767	80,116	6,135	799	2,717	
February	91,706	82,244	5,888	727	2,847	
March	96,085	85,894	6,299	782	3,110	
April	90,679	81,333	5,835	722	2,789	
May	89,188	80,155	5,398	751	2,854	
June	78,921	70,260	5,052	755	2,854	
July	60,926	55,027	3,193	506	2,200	
August	77,619	70,479	3,805	904	2,431	
September	72,109	64,887	3,930	929	2,363	
October	81,049	73,058	4,104	1,120	2,767	
November	72,866	65,022	4,114	1,057	2,673	

Monthly Tin Production at Longhorn Smelter

(From Concentrates)

(In tons of 2,240 pounds)

	1954	1955	1956	1957
Jan.	2,750	2,402	1,754	1,564
Feb.	3,009	2,505	1,704	....
Mar.	3,559	2,353	1,802	....
Apr.	3,006	2,103	1,803	....
May	2,054	1,604	2,001	....
June	1,205	851	953	....
July	NIL	950	NIL	....
Aug.	2,002	1,749	1,453	....
Sept.	2,404	1,751	1,349	....
Oct.	2,404	1,803	1,654	....
Nov.	2,296	1,804	1,655	....
Dec.	2,403	2,454	1,655	....
Total	27,001	22,329	17,631	....

Quicksilver Averages

N. Y. Monthly Averages
Virgin, Dollars per 76-lb. Flask

	1954	1955	1956	1957
Jan.	189.60	324.68	277.88	256.00
Feb.	190.00	324.68	270.29	....
Mar.	201.63	322.61	261.40	....
Apr.	221.36	318.14	267.22	....
May	251.20	306.62	267.675	....
June	273.46	286.98	260.69	....
July	287.40	268.22	256.06	....
Aug.	290.71	255.18	256.00	....
Sept.	314.08	263.70	256.00	....
Oct.	329.50	279.02	255.92	....
Nov.	321.17	282.50	255.13	....
Dec.	319.96	282.27	256.00	....
Av.	265.84	292.90	261.71	....

Nickel Averages

Electro, cathode sheets, 99.00%,
f.o.b. refinery, duty included
(Cents per pound)

	1954	1955	1956	1957
Jan.	60.00	64.50	64.50	74.00
Feb.	60.00	64.50	64.50	....
Mar.	60.00	64.50	64.50	....
Apr.	60.00	64.50	64.50	....
May	60.00	64.50	64.50	....
June	60.00	64.50	64.50	....
July	60.00	64.50	64.50	....
Aug.	60.00	64.50	64.50	....
Sept.	60.00	64.50	64.50	....
Oct.	60.00	64.50	64.50	....
Nov.	60.98	64.50	64.50	....
Dec.	64.50	64.50	72.48	....
Av.	60.46	64.50	65.165	....

Platinum Averages

N. Y. MONTHLY QUOTATIONS
(Dollars per Troy Ounce)

	1954	1955	1956	1957
Jan.	91.40	81.00	106.30	101.92
Feb.	91.00	78.16	104.34	....
Mar.	87.88	78.00	104.23	....
Apr.	85.50	77.94	103.92	....
May	85.50	77.50	105.23	....
June	85.50	78.33	106.50	....
July	85.50	81.78	106.50	....
Aug.	85.00	84.59	105.76	....
Sept.	85.50	91.96	105.50	....
Oct.	83.62	94.60	104.85	....
Nov.	81.07	103.11	104.50	....
Dec.	80.64	106.58	104.50	....
Av.	85.72	86.12	105.18	....

Primary Aluminum Output, Shipments and Stocks

(U. S. Department of Interior)

	Stocks beginning of month short tons	Production short tons	—Sold or Used— Short tons	Value f. o. b. plant	Stocks end of month short tons
1955					
December	14,173	140,748	139,901	63,319,738	15,020
1956					
January	15,020	140,394	135,598	\$61,362,549	19,816
February	19,816	132,763	135,505	61,284,856	17,074
March	17,074	145,895	143,729	65,043,396	19,240
April	19,240	144,726	149,854	70,479,739	14,112
May	14,112	150,800	153,014	73,940,389	11,898
June	11,898	145,729	140,225	67,775,239	17,399
July	17,399	151,624	134,089	64,858,158	34,925
August	34,925	92,406	90,614	44,519,556	36,717
September	36,717	132,316	121,854	60,104,570	47,179
October	47,179	149,125	134,014	67,126,363	62,290
November	62,290	145,081	119,787	60,252,640	87,584

Aluminum Wrought Products

PRODUCERS' MONTHLY NET SHIPMENTS

(Bureau of Census — Thousands of Pounds)

	Total	Plate, Sheet, & Strip	Rolled Structural Shapes, Rod, Bar & Wire	Extruded Shapes Tube Blooms & Tubing	Powder, Flake, & Paste
1952 Total	1,924,750	1,085,699	443,546	347,542	47,963
1953 Total	2,286,865	1,368,165	422,946	451,922	44,732
1954 Total	2,088,439	1,165,090	357,229	518,070	46,255
1955					
May	234,309	125,176	30,979	75,371	2,813
June	255,701	136,420	35,306	74,792	3,035
July	210,222	113,305	27,070	62,918	2,379
August	250,036	141,400	29,413	67,904	3,039
September	244,135	134,240	32,973	67,407	2,926
October	248,806	138,328	30,554	71,456	2,926
November	245,526	137,109	31,656	67,798	2,658
December	242,993	138,592	31,802	64,159	1,837
Total	2,805,500	1,542,368	365,391	812,311	35,854
1956					
January	251,772	142,049	34,008	67,499	2,118
February	240,999	134,077	33,727	65,261	1,901
March	232,767	128,432	30,972	63,482	1,947
April	260,610	143,859	37,971	69,639	3,316
May	264,378	147,613	39,900	68,106	2,215
June	240,415	132,510	33,438	65,600	2,119
July	247,895	139,571	35,346	64,249	2,736
August	248,457	141,400	32,413	66,315	3,039
September	217,425	117,074	32,154	59,462	2,953
October	252,289	136,546	25,385	73,363	2,255
November	216,927	114,618	23,157	64,260	1,716

Aluminum Castings Shipments

(Bureau of Census)

BY TYPE OF CASTING

		(Thousands of Pounds)	BY TYPE OF CASING			
		Total	Sand	Permanent Mold	Die	All Other
1951	Total	515,131	193,378	160,011	151,465	10,277
1952	Total	518,979	194,616	146,883	169,732	7,748
1953	Total	658,022	214,553	200,025	239,330	4,114
1954	Total	609,066	155,738	213,968	232,726	6,800
1955						
May		71,691	14,231	25,597	31,243	616
June		68,473	14,920	24,682	27,939	932
July		55,033	11,716	21,006	21,656	655
August		64,864	14,916	22,267	27,004	576
September		67,170	14,870	23,075	28,532	693
October		72,197	14,485	25,135	31,741	836
November		75,065	14,327	26,267	33,852	619
December		75,275	15,291	25,031	34,347	606
1955	Total	833,058	171,757	298,115	354,804	8,282
1956						
January		74,152	15,861	24,528	33,253	510
February		73,096	15,560	23,963	32,949	624
March		73,785	16,597	22,816	33,965	407
April		67,880	14,732	20,718	31,782	648
May		65,786	15,600	19,669	29,814	703
June		58,189	13,448	19,067	25,027	647
July		52,955	12,398	16,388	23,491	678
August		61,407	13,100	18,067	29,553	687
September		62,503	12,354	17,855	31,640	654

METALS, FEBRUARY, 1957

Virgin Aluminum

Virgin 99% Delivered
Monthly Average Prices

	(Cents per pound)			
	1954	1955	1956	1957
Jan.	21.50	22.90	24.40	27.10
Feb.	21.50	23.20	24.40	....
Mar.	21.50	23.20	24.60	....
Apr.	21.50	23.20	25.90	....
May	21.50	23.20	25.90	....
June	21.50	23.20	25.90	....
July	21.50	23.20	25.90	....
Aug.	22.12	24.26	26.70	....
Sept.	22.20	24.40	27.10	....
Oct.	22.20	24.40	27.10	....
Nov.	22.20	24.40	27.10	....
Dec.	22.20	24.40	27.10	....
Av.	21.785	23.655	26.008	....

Magnesium Wrought Products Shipments

(Bureau of Census)

(Thousands of Pounds)

	1953	1954	1955	1956
Jan. ..	1,313	972	1,776	2,118
Feb. ..	1,601	1,136	1,648	1,901
Mar. ..	1,601	1,136	1,947	1,946
Apr. ..	1,708	892	1,756	2,279
May ..	1,699	1,129	1,836	2,462
June ..	1,192	1,312	1,686	2,302
July ..	1,589	1,032	1,437	2,002
Aug. ..	1,433	1,111	1,742	2,523
Sept. ..	1,254	1,183	2,159	1,988
Oct. ..	1,409	1,002	1,667	861
Nov. ..	1,314	1,243	1,954	2,140
Dec. ..	919	1,673	1,577	....
Total	16,885	13,743	21,186	....

Cadmium Averages

N. Y. Monthly Averages

Cents per lb. in ton lots

	1954	1955	1956	1957
Jan.	200.00	170.00	170.00	170.00
Feb.	170.00	170.00	170.00	....
Mar.	170.00	170.00	170.00	....
Apr.	170.00	170.00	170.00	....
May	170.00	170.00	170.00	....
June	170.00	170.00	170.00	....
July	170.00	170.00	170.00	....
Aug.	170.00	170.00	170.00	....
Sept.	170.00	170.00	170.00	....
Oct.	170.00	170.00	170.00	....
Nov.	170.00	170.00	170.00	....
Dec.	170.00	170.00	170.00	....
Av.	172.50	170.00	170.00	....

Steel Ingot Production

(American Iron and Steel Institute)

Period	OPEN HEARTH		BESSEMER		ELECTRIC		TOTAL		Calculated weekly production, all companies (net tons)
	Net tons of capacity	Per cent	Net tons of capacity	Per cent	Net tons of capacity	Per cent	Net tons of capacity	Per cent	
1952 Total	82,846,439	87.2	3,523,677	65.5	6,797,923	82.6	93,168,039	85.8	1,782,097
1953 Total	100,473,823	97.9	3,855,705	83.2	7,230,191	71.1	111,609,719	94.9	2,140,578
1954 Total	80,327,494	73.6	2,548,104	58.2	5,436,054	52.0	88,311,652	71.0	1,693,741
1955									
January	9,369,704	100.0	330,150	81.2	801,196	87.3	10,501,050	98.2	2,370,440
February	9,141,244	100.0	306,674	77.9	799,480	89.9	10,247,398	99.0	2,388,671
March	9,390,000	100.5	292,000	72.0	786,000	85.8	10,468,000	98.1	2,368,000
April	10,842,886	95.6	3,319,088	69.3	8,338,592	77.2	11,000,566	93.0	2,243,969
1956									
January	9,676,151	101.4	323,235	79.5	828,845	86.6	10,828,231	99.3	2,444,296
February	9,043,064	101.3	296,543	78.0	779,388	87.1	10,118,995	99.2	2,444,202
March	9,795,263	102.7	310,060	76.3	819,465	85.7	10,924,788	100.2	2,466,092
April	9,437,945	102.2	306,388	77.9	779,451	84.2	10,523,785	99.7	2,455,097
May	9,370,167	98.2	297,990	73.3	822,219	86.0	10,490,376	96.2	2,368,031
June	8,665,044	93.9	282,846	71.9	773,546	83.6	9,721,436	92.1	2,266,039
July	1,330,151	13.9			292,012	30.5	1,622,163	14.9	367,008
August	7,213,274	75.6	189,564	46.6	719,759	75.3	8,122,597	74.5	1,833,543
September	9,342,795	101.2	286,978	72.9	792,885	85.7	10,422,659	98.8	2,433,201
October	9,841,002	103.2	330,101	81.2	877,410	91.8	11,048,513	101.3	2,575,411
November	9,430,248	102.2	295,827	72.5	829,925	89.6	10,555,500	100.0	2,460,490
December	9,695,919	101.6	308,465	75.9	833,161	87.1	10,837,545	99.4	2,451,933
Total	102,840,585	91.6	3,227,997	67.4	9,147,567	81.2	115,216,149	89.8	2,203,828
1957									
January	9,828,000	99.0	295,000	77.1	878,000	85.8	11,001,000	97.1	2,483,000

Blast Furnace Output

(American Iron and Steel Institute)

Period	net tons		Total Capacity	% of Capacity
	Pig Iron	Ferro-manganese & Spiegel		
1947				
Ttl. Yr.	58,507,169	702,561	59,209,730	90.1
1948				
Ttl. Yr.	60,135,941	712,899	60,848,840	90.2
1949				
Ttl. Yr.	53,613,779	592,564	54,206,343	76.9
1950				
Ttl. Yr.	64,810,272	673,896	65,484,168	91.5
1951				
Ttl. Yr.	70,487,380	745,881	71,232,761	93.8
1952				
Ttl. Yr.	61,828,665	629,926	62,458,591	84.2
1953				
Total	74,987,721	865,038	75,842,759	95.5
1954				
Aug.	4,529,291	37,744	4,567,035	71.0
Sept.	4,417,883	43,934	4,461,822	66.3
Oct.	4,937,436	46,244	4,983,680	71.5
Nov.	5,204,446	52,454	5,256,900	77.9
Dec.	5,626,720	59,793	5,686,513	80.4
Total	58,119,882	568,735	58,688,617	71.6
1955				
Jan.	5,729,404	55,249	5,784,653	81.1
Feb.	5,394,585	48,182	5,442,767	84.5
Mar.	6,406,902	57,049	6,463,951	90.6
Apr.	6,329,927	64,712	6,384,639	92.4
May	6,768,236	61,699	6,804,935	95.4
June	6,495,050	48,735	6,543,785	94.7
July	6,329,393	61,166	6,390,559	89.8
Aug.	6,829,580	71,902	6,901,482	92.5
Sept.	6,653,678	49,788	6,703,466	97.3
Oct.	6,905,280	59,993	6,965,273	97.6
Nov.	6,636,649	62,341	6,698,990	97.0
Dec.	6,867,667	65,849	6,933,516	97.7
Total	77,114,073	868,758	77,800,831	92.7
1956				
Jan.	6,985,945	63,619	7,049,564	97.1
Feb.	6,539,199	63,618	6,602,817	97.2
Mar.	7,083,877	65,566	7,149,443	98.5
Apr.	6,860,533	63,760	6,924,293	95.6
May	6,873,102	47,840	6,920,942	95.3
June	6,887,608	46,981	6,934,589	91.6
July	1,089,518	17,491	1,107,009	15.2
Aug.	6,100,669	41,548	6,142,217	70.8
Sept.	6,873,064	59,584	6,932,648	98.7
Oct.	7,245,630	69,909	7,315,539	100.8
Nov.	6,977,457	58,614	7,036,071	100.1
Dec.	7,268,743	65,841	7,334,584	101.0
Total	75,301,134	664,341	75,965,475	88.9

GALVANIZED SHEET SHIPMENTS

(American Iron and Steel Institute)

Period	(Net Tons)		1955	1956
	1953	1954		
Jan.	201,472	169,086	211,101	269,464
Feb.	183,503	167,433	199,408	272,997
Mar.	204,995	180,198	238,649	291,193
Apr.	196,658	203,312	229,001	266,728
May	189,745	201,671	225,962	272,741
June	184,862	200,456	248,940	279,058
July	185,896	214,349	205,211	*
Aug.	187,741	207,113	241,863	276,048
Sept.	194,257	209,765	269,020	256,803
Oct.	208,705	209,498	260,010	278,637
Nov.	177,391	195,190	255,692	255,135
Dec.	176,375	205,561	261,640	239,173
Total	2,290,868	2,362,632	2,864,497	2,957,991

* Combined with August figures

Steel Castings Shipments

(Bureau of Census)

Period	(Short Tons)		For Own Use
	Total	For Sale	
1950	1,461,667	929,192	374,217
1951	2,101,604	1,507,413	594,191
1952	1,925,116	1,476,352	448,767
1953	1,829,277	1,290,016	431,330
1954			
July	75,848	53,207	22,641
Aug.	89,590	66,792	22,798
Sept.	88,359	64,722	23,637
Oct.	87,085	64,004	23,081
Nov.	87,659	64,812	22,847
Dec.	93,547	69,843	23,704
Total	1,184,096	880,158	303,938
1955			
Jan.	98,238	75,044	23,194
Feb.	106,430	80,729	25,701
Mar.	127,460	98,926	28,534
Apr.	120,053	92,237	27,816
May	122,465	92,713	29,752
June	133,887	102,457	31,430
July	97,875	71,170	26,705
Aug.	126,406	96,290	30,116
Sept.	140,843	107,622	33,221
Oct.	145,674	110,409	35,265
Nov.	152,381	116,908	35,473
Dec.	158,982	122,201	36,781
Total	1,530,694	1,166,706	363,988
1956			
Jan.	158,618	123,343	35,275
Feb.	165,398	128,598	36,800
Mar.	170,045	130,839	39,206
Apr.	163,708	125,015	38,693
May	178,227	142,025	36,202
June	164,661	129,147	35,514
July	117,984	96,350	21,634
Aug.	159,831	127,001	32,830
Sept.	155,046	121,705	33,341
Oct.	175,630	135,798	39,832
Nov.	164,114	126,900	37,214

SHIPMENTS OF TIN-TERNE PLATE

(American Iron and Steel Institute)

Period	(Net Tons)		1955	1956
	Hot Dipped	Electrolytic		
Jan.	82,874	81,034	335,682	402,627
Feb.	88,189	77,877	344,467	404,193
Mar.	94,434	133,257	419,574	598,129
Apr.	89,492	138,556	441,194	554,575
May	125,679	70,282	481,805	354,204
June	130,603	84,371	520,305	466,060
July	76,473	*	291,405	*
Aug.	111,482	81,005	441,201	408,903
Sept.	116,295	72,400	471,624	396,588
Oct.	60,355	92,394	249,790	415,451
Nov.	59,269	70,510	240,503	325,408
Dec.	65,363	68,385	263,087	288,896
Total	1,100,762	950,070	4,503,637	4,615,068

* Combined with August figures

Steel Ingot Operations

(Percentage of Capacity as Reported by American Iron & Steel Institute)

American Iron & Steel Institute)					
Week					
Beginning	1954	1955	1956	1957	
Jan. 7...	75.4	81.2	97.6	98.4	
Jan. 14...	74.3	83.2	98.6	96.4	
Jan. 21 ..	74.1	83.2	99.0	96.6	
Jan. 28...	75.6	85.0	100.4	97.6	
Feb. 4...	74.4	85.4	99.3	97.1	
Feb. 11...	74.4	86.8	99.1	97.7	
Feb. 18...	74.6	89.1	98.8	96.7	
Feb. 25...	73.6	90.8	98.8	....
Mar. 4...	70.7	91.9	99.9	....
Mar. 11...	69.3	92.9	100.0	....
Mar. 18 ..	67.6	94.2	100.6	....
Mar. 25...	68.1	93.7	99.5	....
Apr. 1...	69.1	94.4	99.6	....
Apr. 8...	68.0	95.3	97.7	....
Apr. 15...	68.0	94.6	100.9	....
Apr. 22...	68.6	94.6	100.2	....
Apr. 29...	68.7	95.6	100.5	....
May 6...	69.4	96.6	96.4	....
May 13...	70.9	97.2	95.2	....
May 20...	71.8	96.9	95.3	....
May 27...	71.2	96.4	97.3	....
June 3...	70.2	95.8	96.3	....
June 10...	73.2	94.7	96.7	....
June 17...	72.3	96.0	93.4	....
June 24...	72.1	95.0	93.0	....
July 1...	65.8	71.1	84.9	....
July 8...	60.0	85.9	12.3	....
July 15...	64.3	91.2	12.9	....
July 22...	65.3	91.0	14.6	....
July 29...	64.2	90.7	17.0	....
Aug. 5 ..	64.0	86.9	16.9	....
Aug. 12...	64.0	89.4	57.5	....
Aug. 19...	61.8	90.2	87.5	....
Aug. 26...	63.5	90.6	95.8	....
Sept. 2...	64.0	93.4	97.0	....
Sept. 9...	63.0	93.8	98.7	....
Sept. 16...	66.3	95.7	100.6	....
Sept. 23...	68.7	96.1	100.6	....
Sept. 30...	70.4	97.0	101.6	....
Oct. 7...	71.0	96.7	101.8	....
Oct. 14...	72.8	96.5	100.9	....
Oct. 21...	73.6	98.9	101.4	....
Oct. 28...	74.5	100.0	101.2	....
Nov. 4...	76.4	99.4	101.3	....
Nov. 11...	77.2	99.6	100.6	....
Nov. 18...	79.3	99.2	100.2	....
Nov. 25...	80.3	100.1	100.1	....
Dec. 2...	81.4	97.6	101.1	
Dec. 9...	82.5	100.1	101.3	
Dec. 16...	81.5	100.3	102.0	
Dec. 23...	72.4	96.9	94.3	
Dec. 30...	77.6	95.7	97.3	

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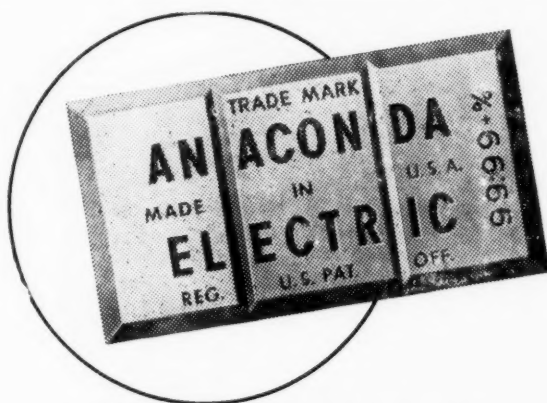
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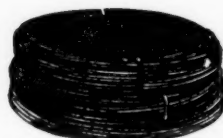
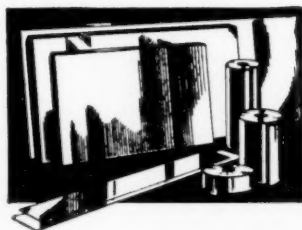


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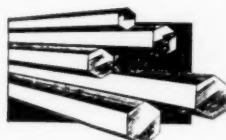
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